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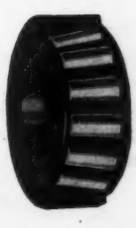

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U. S. Production Increases to 137,614 Barrels Above Federal Allowable; Texas Down

By JAMES McINTYRE

THE production line took an upward turn in the past week, and it cannot be blamed to Texas. The increase of 22,925 bbls. per day brought production up 137,614 bbls. per day higher than the Federal allowable. Oklahoma City increased 31,710 bbls.; Seminole-St. Louis 17,835 bbls., and the combined California fields 15,650 bbls. while the East Texas field declined 36,660 bbls. and all Texas declined 39,011 bbls. The Gulf Coast field in Texas and Louisiana declined 7,123 bbls.

The strike situation in San Francisco has had a serious effect on the marketing of refined products in that big district. Gasoline is as precious as diamonds there and the marketing of it is confined largely to those whose duties demand that they be supplied. This includes physicians and the military.

The potential production of Michigan fields reached a peak of 180,346 bbls. on July 1, as against 131,801 bbls. on June 1. Last week's completions brought in 12,000 bbls. a day of new production indicating that the top of Michigan's potential has not been reached.

The Bosco field in Southern Louisiana is expected to prove the most productive area in the Coastal Louisiana division. An intensive drilling campaign is being pursued there. The Cleveland Pool in Liberty County, Texas Gulf Coast, was extended 1,366 feet west with the 70-bbl.-per-hour well of Gulf Production Company.

In Oklahoma a well drilled to the Simpson series in the Fitts Pool in Pontotoc County started at 322 bbls. per day at a total depth of 4,445 feet, which puts new life in that area and proves that no operation there is conclusive until it has tested all of the many sands to be found in that area.

The Eunice Pool in Lea County, New Mexico was extended 1,320 feet easterly with an 870-bbl. well and an edge well in the Hobbs Pool in Lea County flowed 3,953 bbls. a day after an acid treatment.

In Zapata County, lower Laredo district in Southwest Texas, big gas production was found in the Mt. Selman formation, a new pay for that area. The well started at 20,000,000 feet with a shut-in pressure of 575 pounds. The production comes from broken sands at 2,041-2,247 feet, a deep pay in that part of the state.

Bankers and other business men in the East Texas district at a public meeting poured criticism on the Texas Railroad Commission for not stopping hot oil production. The commission had previously criticized certain East Texas bankers for passing on oil tenders. The production of illicit crude goes on persistently.

A showing of oil and gas at a depth of 10,581-10,631 feet in a drilling well in Upton County, Texas, threatens to rob Oklahoma of the credit of having the deepest oil producing well in the United States.

Crude Oil Production in the United States

Estimated daily average production for the week ending July 14 and a comparison with previous week and the Federal allowables follow:

		Federal allowable	
Oklahoma—	July 14	July	July 7
Oklahoma City	210,300	.....	178,590
Seminole-St. Louis	107,215	.....	89,380
Remainder of State	233,545	.....	232,465
Total Oklahoma	551,060	489,500	500,435
East Texas—			
Lathrop	227,530	.....	242,060
Kilgore	165,380	.....	176,590
Joiner	147,540	.....	157,560
Total East Texas	540,450	.....	577,110
West Texas	135,562	.....	134,792
North Central Texas	91,995	.....	91,414
Texas Panhandle	58,615	.....	63,155
East Central Texas	51,247	.....	54,744
Gulf Coast Texas	167,442	.....	170,955
Southwest Texas	56,005	.....	48,157
Total State of Texas	1,101,316	1,042,100	1,140,327
Kansas	135,670	134,500	130,545
North Louisiana	24,835	.....	25,020
Gulf Coast—Louisiana	68,745	.....	72,355
Total Louisiana	93,580	88,900	97,375
Arkansas	31,810	33,000	31,880
Eastern Fields (except Michigan)	99,000	108,900	104,500
Michigan	30,258	33,200	31,677
Rocky Mountain area	96,570	90,800	96,250
California—			
Santa Fe Springs	42,700	.....	42,750
Long Beach	69,500	.....	69,000
Mountain View	6,950	.....	7,900
Elwood	11,100	.....	10,850
Kettleman Hills	63,500	.....	54,500
Remainder of State	334,900	.....	327,000
Total California	528,650	509,400	512,000
Total United States	2,667,914	2,530,300	2,644,989

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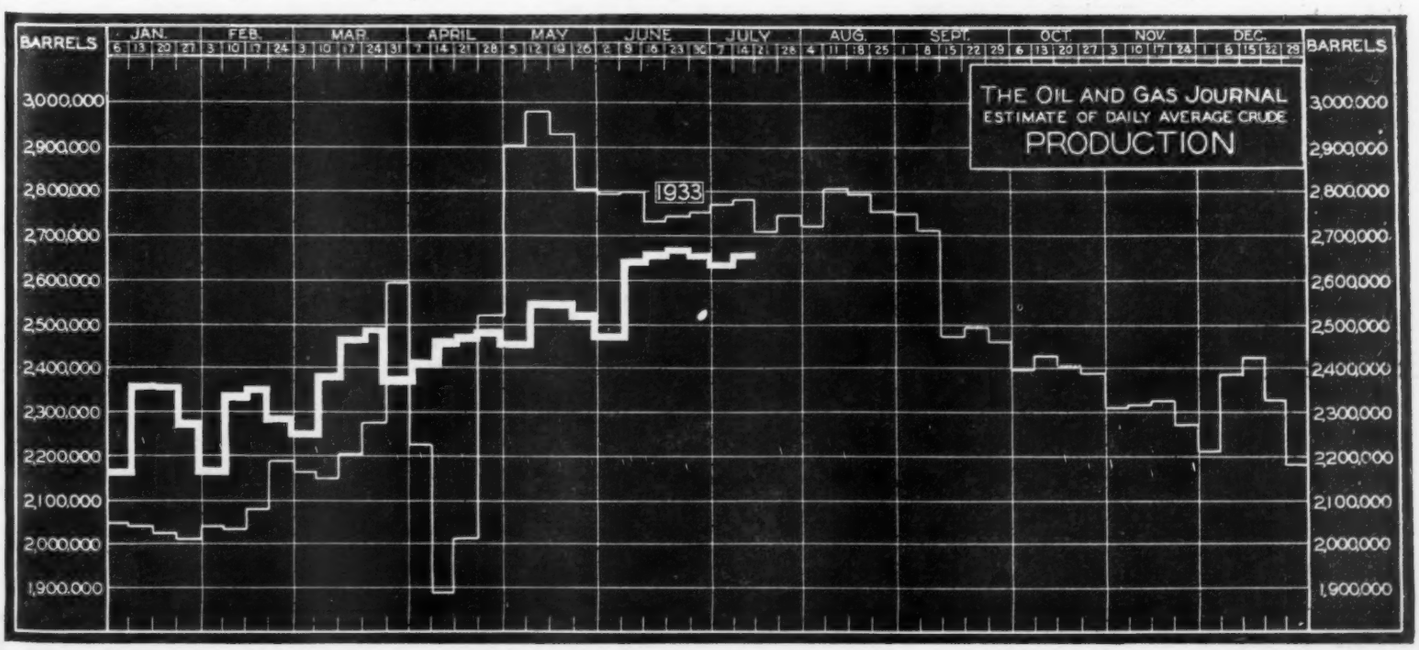


Government Report Shows Domestic Gasoline Demand Running 2 Per Cent Ahead of Peak

By C. O. WILLSON

With an 11.2 per cent increase over May of last year the latest report of the Bureau of Mines covering May refinery operations released last week continues to point to an all-time record in domestic motor fuel consumption for 1934.

As shown in the accompanying table, the indicated domestic demand for motor fuels the first five months of this year based on refinery and natural gasoline plant shipments totaled 155,868,000 bbls., an increase of 9.6 per cent over the same period in 1933. The peak year in domestic gasoline demand was in 1931 and during the first five months of that year domestic shipments totaled 153,128,000 bbls., which means that the demand up to June 1 of this year was running about 2 per cent ahead of the peak. The total demand for motor fuels (domestic consumption plus exports) is running behind 1930. This is due to the large decline in exports. Exports of motor fuels the first five months of 1931 totaled 20,519,000 bbls., which compares with 11,135,000 bbls. for the same period this year.

The peak year in total motor fuel demand (domestic consumption plus exports) was in 1930 due in part to the large exports which were in excess of 65,000,000 bbls. for the year. In that year, exports for the first five months totaled 27,486,000 bbls., which means that exports this year are running about 40 per cent of the peak. The gain in domestic requirements this year has not offset this large decline in foreign business so that the total demand is running about 91 per cent of 1930.

When the comparisons are confined to 1933 the increase in domestic motor fuel demand this year is much greater than the decline in exports so that the total demand as shown in the table was 8.1 per cent greater the first five months.

Other Products Gain

Fortunately, the gain in gasoline demand has been accompanied by similar or larger increases in the demand for the other principal refinery products. In previous years when the demand for gasoline showed substantial gains the consumer requirements for other products were often unchanged and this brought about an unbalanced situation which was unfavorable from the market angle.

While the increases are showing a tendency to flatten out when compared with government reports made earlier in the year it will be noted in the table that the total demand for kerosene, gas oil and fuel oil and lubricating oil is showing a larger gain than motor fuels when compared with 1933. In the case of these products an enlarged domestic demand is aided by increases in foreign business. The gain in demand for kerosene continues to be in excess of 20 per cent with a 23.1 per cent increase in domestic requirements the first five months. Due to a 30.5 per cent gain in domestic business the total demand for lubricating oils is also more than 20 per cent ahead of last year. It is predicted that this gain will decline to more normal levels over the latter part of this year. The phenomenal increase in the domestic demand for lubricating oils started the latter part of last year, reflecting in part an increase in industrial business with considerable speculative buying in expectation of higher prices.

The data on petroleum wax reflect a trend which is the opposite of the other refinery products shown in table. A 22.3 per cent increase in total supply which includes a large increase in imports coupled with an 11.9 per cent decline in total demand, has brought a month to month increase in stocks since the first of the year. The largest decline has been in the export end where refiners in the United States have lost business to foreign refiners who have enlarged their facilities for the manufacture of wax.

Crude Oil

The May figures on crude oil did not indicate any improvement in basic conditions. The supply was well ahead of April with the largest monthly increase of the year in stocks. A study of these data show clearly that the producing end of the business would have been in serious trouble months ago if it had not been for the gain in the demand for refinery products which has been much larger than generally predicted at the start of the year. Figuring the increase

(Continued on Page 33)

Crude Oil and Refinery Situation Summarized—First Five Months of 1934-1933

Supply and Demand—Crude Oil (Bbls.)

	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks refinable crude May 31
1934, first 5 months	382,738,000	381,160,000	*1,578,000	*.4	368,640,000	14,098,000	366,113,000	15,047,000	355,883,000
1933, first 5 months	364,508,000	360,585,000	*3,873,000	*1.1	350,389,000	14,119,000	349,058,000	11,527,000	343,588,000
Increase, 1934	18,230,000	20,575,000			18,251,000	†21,000	17,055,000	3,520,000	12,295,000
Increase, 1934	5%	5.6%			5.2%	†.15%	4.8%	30.5%	3.5%

Supply and Demand—Refinery Products—Motor Fuel (Bbls.)

	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks May 31
1934, first 5 months	169,337,000	167,003,000	*2,334,000	*1.4	169,336,000	1,000	155,868,000	11,135,000	‡61,628,000
1933, first 5 months	159,685,000	154,457,000	*5,228,000	*3.4	159,680,000	5,000	142,224,000	12,233,000	59,033,000
Increase, 1934	9,652,000	12,546,000			9,656,000	†4,000	13,644,000	†1,098,000	2,595,000
Increase, 1934	6%	8.1%			6%	†80%	9.6%	†8.9%	4.4%

Kerosene

1934, first 5 months	22,239,000	23,326,000	1,087,000	4.6	22,239,000		19,493,000	3,833,000	5,470,000
1933, first 5 months	20,123,000	19,336,000	*787,000	*4.0	20,123,000		15,835,000	3,501,000	5,761,000
Increase, 1934	2,116,000	3,990,000			2,116,000		3,658,000	332,000	†291,000
Increase, 1934	10.5%	20.6%			10.5%		23.1%	9.5%	†5.0%

Gas Oil and Fuel Oil

1934, first 5 months	133,997,000	158,751,000	24,754,000	18.4	132,860,000	1,137,000	147,043,000	11,708,000	106,279,000
1933, first 5 months	129,229,000	140,063,000	10,834,000	8.3	126,466,000	2,763,000	131,789,000	8,274,000	125,975,000
Increase, 1934	4,768,000	18,688,000			6,394,000	†1,626,000	15,254,000	3,434,000	†19,696,000
Increase, 1934	3.6%	13.3%			5.0%	†58%	11.5%	41.5%	†15.6%

Lubricating Oil

1934, first 5 months	11,114,000	11,371,000	257,000	2.2	11,114,000		7,977,000	3,394,000	6,773,000
1933, first 5 months	9,227,000	9,435,000	208,000	2.2	9,227,000		6,117,000	3,318,000	8,167,000
Increase, 1934	1,887,000	1,936,000			1,887,000		1,860,000	76,000	†1,394,000
Increase, 1934	20.4%	20.5%			20.4%		30.4%	2.3%	†17.0%

Petroleum Wax (Lbs.)

1934, first 5 months	230,681,000	200,793,000	*29,888,000	*14.8	210,000,000	20,681,000	115,165,000	85,678,000	101,551,000
1933, first 5 months	188,518,000	227,880,000	39,362,000	20.9	179,480,000	9,038,000	120,479,000	107,401,000	124,770,000
Increase, 1934	42,163,000	†27,087,000			40,520,000	11,643,000	†5,314,000	†21,773,000	†23,219,000
Increase, 1934	22.3%	†11.9%			22.5%	128%	†4.4%	†20.2%	†4.4%

*Excess supply. †Decrease. ‡Revised method includes gasolines at refineries, bulk terminals and pipe lines. Note—Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments.

Crude Oil Runs to Stills and Total All Oils (Bbls.)

	Total crude to stills	Nat. gasoline production	% Gasoline yield from crude oil‡	Total supply all oils*	Total demand all oils*	Stocks all oils March 31
1934, first 5 months	359,610,000	14,671,000	45.9	403,928,000	418,428,000	587,713,000
1933, first 5 months	338,281,000	13,640,000	46.2	384,916,000	374,823,000	598,202,000
Increase, 1934	21,329,000	1,031,000		19,012,000	43,605,000	†10,489,000
Increase, 1934	6.3%	7.5%		4.8%	11.6%	†1.7%

*Total all oils includes crude oil, refined products, natural gasoline and benzol. †Decrease. ‡Includes natural gasoline blended at refineries. All data based on Bureau of Mines reports.

Gasoline Production Allowables for August Cut to Permit Reduction of Excessive Inventories

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., July 16.—A decrease of 930,000 bbls. in gasoline production in August as compared with July was announced by Secretary Harold L. Ickes, oil administrator, in approving a national gasoline production allowable of 36,270,000 bbls., effective August 1. Although gasoline demand in August will probably approximate that in July, a decrease in production was recommended as necessary to reduce excessive gasoline inventories to a more economic level.

The production of gasoline in the country as a whole necessary to meet the demand, due regard being given to normal and seasonal fluctuation in refining operations, during the month of August is set at 36,270,000 bbls. It is further determined that the maintenance of desirable economic levels of gasoline inventories, due regard being given to the normal seasonal decrease in gasoline stocks, requires that gasoline inventories be reduced 4,270,000 bbls. during the month of August, 1934.

Howard Bennette, national co-ordinator, urges each refiner to particularly note the new Paragrah 8 in the order.

The text of the order follows:

Determinations

1

The allowed production of gasoline by refinery districts (including the production of straightrun and cracked gasoline and the natural gasoline blended therewith, either at refineries or terminals) has been determined, in accordance with Section 3, Article 4, of the code, to be, for the month of August, 1934, as follows:

District—	Amount (42-gal. bbls.)
1. East Coast	6,142,000
2. Appalachian	1,585,000
3. Indiana-Illinois-Kentucky	5,944,000
4. Oklahoma-Kansas-Missouri	4,656,000
5. Texas:	
(a) Inland Texas	2,873,000
(b) Texas Gulf Coast	7,207,000
6. Louisiana-Arkansas:	
(a) Louisiana Gulf Coast, including Ala.	1,240,000
(b) North Louisiana-Arkansas, including Miss.	852,000
7. Rocky Mountain	817,000
8. California	4,954,000
Total United States	36,270,000

Paragraphs 2, 3 and 4 are unchanged from preceding orders.

5

In computing August gasoline production comparable to allocations made, each refinery shall take into consideration the following factors:

(a) Changes in inventory of both finished and unfinished gasoline between July 31 and August 31.

Note: Changes in stocks of unfinished gasoline will affect gasoline production only to the extent that the gasoline recovered by processing unfinished gasoline is in excess of or less than the quantity previously reported as contained in unfinished gasoline in storage.

(b) Purchases of gasoline for redistillation or reforming.

Note: In computing gasoline production comparable to the allocation received, finished gasoline, and the unfinished gasoline contained in naphtha distillates sold or shipped to other refineries for reforming or rerunning shall be reported as finished gasoline by the refinery which produced it and not included or reported as part of the production of the reforming or rerunning refinery.

The purchasing company shall, however, include as its own gasoline stocks, any of such finished gasoline, unfinished gasoline or unfinished gasoline contained in naphtha distillates which it had on hand at the beginning and at the end of the reporting period.

(c) Gasoline production shall be determined by the following method:

To the total amount of finished and unfinished gasoline on hand at the end of the month, add the total shipments of finished gasoline and the amount of unfinished gasoline, if any, shipped to other refineries for reforming or rerunning. From the total of these items deduce the amount of finished and unfinished gasoline (as defined) on hand at the beginning of the month. Deduct also any quantities of finished or unfinished gasoline purchased or received from other refineries for rerunning or reforming. The net result shall be considered the production of gasoline.

Paragraph 6 repeats usual definitions.

7

Refining companies shall be accountable for gasoline in storage at bulk terminals owned by them and their affiliated and subsidiary companies. All gasoline stocks shall be accounted for at point of rest unless otherwise authorized by the national co-ordinator as provided in Section 4, of Artcle 4.

8

It shall be the duty of the allocator or agency in each district to determine proper gasoline inventory levels for all bulk and pipe line terminals within the district. Companies holding such inventories shall report to the allocator or agency within the district the quantity thereof, the ownership, the monthly shipments therefrom, the receipts thereat by district of origin, and if requested, the name of the manufacturer of such gasoline.

When it is found that any terminal has excessive stocks of gasoline which originated outside of the district it shall become the duty of the allocator or agency of the district, wherein such stocks are located, to require the allocator or agency of the district in which the gasoline originated to take such excessive stocks into consideration when determining the gasoline production allocations for the manufacturer of such gasoline.

9

Natural gasoline used by refiners for blending at bulk terminals with other gasoline shipped from a refinery in the same, or in another district, shall be accounted for as gasoline production of the blending company, and allocations covering such blending operations shall be applied for in the districts in which that blended gasoline is being and has been reported as part of the total production of the company.

10

Production exceeding allocations made or exceeding any authorized modification after appeal as provided in the code shall be in violation of the code.

Surplus Gasoline Purchased

Twelve more contracts for the purchase of surplus gasoline produced from "hot" oil in East Texas have been approved by Administrator Ickes. These contracts call for the purchase of 14,000 bbls. of gasoline. The parties to the instrument are: Southern Oil Refining Co. sold to Sinclair Refining Co., 200 bbls.; Rusk Oil & Refining Co. to Sinclair Refining Co., 200 bbls.; LaPren Refining Co. to Tide Water Oil Co., 1,000 bbls.; Tyler Refining Co. to Shell Petroleum Corp., 600 bbls.; Gilmer Oil Co. to Gulf Refining Co., 2,000 bbls.; Chief Refining Co. to Gulf Refining Co., 1,000 bbls.; Ocean Petroleum Co. to Texas Co., 2,000 bbls.; Shoreline Refining Co. to Humble Oil & Refining Co., 1,000 bbls.; Taylor Refining Co. to Humble Oil & Refining Co., 1,000 bbls.; Alamo Refining Co. to Humble Oil & Refining Co., 1,000 bbls.; Goodson Refining Co. to Gulf Refining Co., 2,000 bbls.; Constantin & Co. to the Standard Oil Co. (Indiana), 2,000 bbls.

These contracts bring to 26,200 bbls. the total which has so far been purchased in the drive to wipe out the huge surplus of gasoline which has been built up through operating on "hot" oil. More contracts are being received daily and are approved by Administrators Ickes as received.

Pipe Line Investigation

The pipe line investigation called for by the recent order of the Interstate Commerce Commission is getting under way. Information concerning this branch of the industry is being accumulated by the commission, but the probability of any hearings being held before fall is very doubtful. It is anticipated this investigation will cover all phases of pipe line operation, with particular emphasis placed on the cost of transportation of oil. The information now being obtained by the commission will be the foundation of the inquiry.

Basis Drilling Schedule

Administrator Ickes has announced a schedule of basic prices to be paid drillers for work in some of the Oklahoma and Texas fields. This schedule has been recommended by the drilling practices committees of the two states. It is intended to meet the fair economic costs of operation in these areas, and is in no sense of the word price fixing it was emphasized by the administrator. The figures were arrived at by the committees after careful investigation and hearings in which all pertinent data available was gathered. Administrator Ickes said "they are believed to represent as accurately as can be obtained at this time the actual cost of drilling operations in the various fields involved. I have been advised by the Planning and Coordination Committee and by the board that the promulgation of the price schedules as a basis for bargaining between drilling contractors and those who employ them will assist materially in increasing compliance with the oil code by drilling contractors whose operating costs have been materially increased by code provisions for shorter hours and better wages."

Drilling costs per foot for rotary drilling in some of the fields, as recommended by the Oklahoma drilling practices committee are: Seminole (above 3,500 feet), $3.34; Seminole (below 3,500 feet), $4.37; Stroud, $3.81; Chandler, $4.34; Lucien (Perry area), $4.34; Crescent, $5.95; Oklahoma City, $5.15. Insufficient figures were presented to determine costs in the southern Oklahoma area.

A per foot cost of $1.51 for rotary drilling in the East Texas Field was recommended for a test period of 90 days by the Texas drilling practices committee. This was decided on to allow time in which to obtain some technical data considered necessary before a final finding could be recommended to the administrator.

A similar 90-day figure was recommended by the committee for rotary drilling in the Government Wells Field, where a temporary cost of $1.48 per foot was set, and in the Greta Field, where a figure of $2.73 was established. The 90-day period in all these instances began to run from May 23, the date on which the committee decided on its recommendations.

Rig Builders Schedule

Several new sections have been added to the oil code to bring derrick and rig building contractors and their employes under provisions for hours of work, wages and fair practice rules. Approval of the provisions was recommended to Administrator Ickes by the Planning and Coordination Committee, the Petroleum Labor Policy Board and the Petroleum Administrative Board.

Employes are brought under the same wage and hour provisions as apply throughout the industry with the work week to average 40 hours. Provision is made for determination by the oil administration of fair wage differentials between the minima paid common labor and the amount to be paid skilled and other labor. This provision requires that the Planning and Co-ordination Committee shall recommend by not later than July 31, 1934, such differential wage rates for

New Chairman of the Board of Standard-Vacuum Oil Co.

GEORGE S. WALDEN

G. S. Walden, former executive vice president of Standard-Vacuum Oil Co., joint Far Eastern subsidiary of Socony-Vacuum and Standard Oil Co. of New Jersey, has been elected chairman of the board and chief executive officer filling the vacancy created by the death of W. B. Walker.

the consideration of the oil administration.

It is expected that approval of the labor and wage provisions will assist the Petroleum Labor Policy Board in dealing with Texas and Oklahoma cases. Employes in these two states have insisted that wage differentials should be established for them, as had been done for other employes in the oil industry. A determination of the differentials could not be undertaken until specific authority was put into the code.

A number of fair practice rules were included in these provisions. These provisions made it an unfair method of competition to induce a breach of contracts for rig building, to misrepresent services; to give rebates and refunds or other similar discounts deviating from the contract price and to cut prices.

Labor Bureau Survey

The survey of wages, hours and working conditions in the petroleum industry which is being conducted by the Bureau of Labor Statistics of the Department of Labor is scheduled to begin field work on July 18, when 20 agents from the bureau will go into the field to acquire data. In order that the data may be gathered and compiled within the shortest possible time, firms are asked to co-operate in every possible way with the field agents. Copies of the report will be sent to all the co-operating firms, but information collected for individual plants will be held in strict confidence and only summary figures published in the final reports.

Two questionnaires are being submitted to the industry by the bureau in which wages, hours and general working conditions are to be set down. One of the questionnaires covers time workers, most of whom will be employes engaged in the plants of the various branches of the industry, namely, production, refinery, pipe line, natural gasoline and marketing operations, all of which will be covered by this survey. The other questionnaire is designed to obtain information on clerical occupations.

Periods covered in this survey include May, 1929; May, 1933; November, 1933; May, 1934, and July, 1934. The bureau requests that all attempts possible be made to obtain the figures requested for May, 1929, but if that information is not available, then the rest should be submitted regardless.

Emphasis is placed by the bureau on the fact that all information received from individual plants is strictly confidential and is handled only by the Bureau of Labor Statistics. No other government agency and no individual in or out of the Government can learn the contents of the questionnaire.

Many Nations Seeking Fuel Self-Sufficiency

The determination of many nations to become as selfsufficient as possible with regard to motor fuel is evidenced by the numerous plans now in operation throughout the world to obtain this essential commodity synthetically from domestic sources, according to C. C. Concannon, chief of the Commerce Department's Chemical Division.

While many products for admixture with gasoline have been tried, alcohol, benzol and methanol appear to have been the most successful to date. In Germany progress has been made in producing gasoline from coal. Recent reports state that after three years' experimental research a British company capitalized at £1,000,000 will establish 20 plants at different points, which are expected when completed to produce 6,000,000 gallons per annum.

In practically every instance it has been necessary to support the production of synthetic motor fuel either through government subsidy or by legislation requiring certain percentages to be mixed with gasoline.

Multiple Cone Mixer Is Very Effective and May Be Constructed at Low Cost

By DANIEL IRWIN

Devices for mixing, contacting and blending liquids have more uses in the refinery than can be readily enumerated. The primary uses of mixing chambers are found in the acid treating, caustic treating and washing of gasoline. This service requires thorough contacting of liquids of different specific gravity, the minimum loss of pressure through the mixer, and large capacity. The mixing equipment illustrated has these qualities and is easy to design and to construct. The pressure drop or loss of head actually obtained in operation will closely approach the theoretical calculated value. This is important and has to do with the capacity of the treating plant.

Figure 1 shows a mixer that has been successfully in use. It consists of a pipe

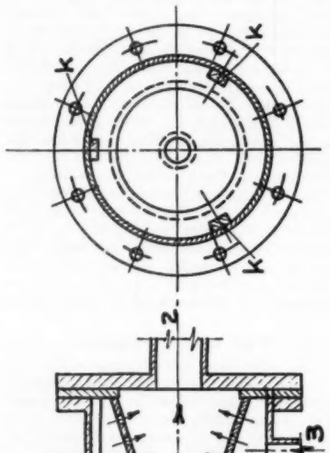


Figure 1.—Detail of cone mixer

chamber containing a number of cones nested in a frame and removable en bloc. The direction of flow is from 1 to 2; the liquids pass through multiple drilled holes in the cones at h. The holes are considered as standard thin plate (sharp edged) orifices in design.

Method of Calculation

A problem will more easily explain the method of calculation of number and size of holes in a cone and the pressure drop in the mixer.

Ten U.S. gallons per second of liquid of specific gravity, 1.0 pass through the mixer, with a maximum velocity of 18 feet per second in the orifices. Factors and values for the orifice design are from Russell ("Textbook of Hydraulics"; Henry Holt & Co., 1925) as follows:

Factor: For standard orifice, $C_c = 0.62$
For liquids (sp. gr. 1.0), $C_v = 0.98$
Corrected factor: $C_c \times C_v = C_d = 0.61$

$$\frac{10 \text{ gals./sec.} \times 231 \text{ cu. in.}}{18 \text{ ft./sec.} \times 12 \times C_d} = 17.25 \text{ sq. in.}$$

area of holes. Using one-half inch drilled holes, this requires:

$$\frac{17.25}{0.196} = 88 \text{ holes per cone.}$$

The size of holes selected for a mixer will be governed by the allowable surface of cone in which they may be drilled, the service required, as to fouling of the openings, though the smaller the holes the better the mixing.

Loss of head or pressure drop through the mixer, in feet:

$$H = \left(\frac{1}{C_v^2} - 1\right) \frac{V^2}{2g} = 0.042 \frac{V^2}{2g}$$

Where V = 18 feet/sec., g (gravity) = 16.08 feet/sec./sec.

$$H = 0.042 \frac{18^2}{32.16} = 0.42 \text{ feet per cone.}$$

The liquids (spec. gr. 1.0) have a head of 2.3 feet per pound pressure, or 0.144 foot per ounce pressure:

$$\frac{0.42}{0.144} = 3 \text{ ounces per cone, or 9 ounces for 3 cones.}$$

Pattern for Cones

Figure 2 shows the pattern for the cones. This method of layout should be

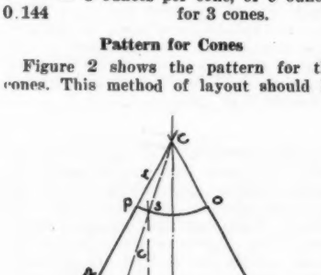


Figure 2.—Development of cone pattern

followed, having established the base and top radii and the erected height of cone.

A b is the base radius.
A a is the top radius.
a c is the height of cone erected.

Triangles a b c and A B C are similar and

$$\frac{a\,b}{A\,B} : \frac{a\,c}{A\,C} : \text{or assuming in the problem}$$

that 4" is the base radius, 2" is the top radius and 9" is the height of cone. X = the distance A C from which the cutting radius R is obtained:

$$\frac{4-1}{4} = \frac{9}{X} : 3X = 36 \text{ and } X = 12''$$

$$R = \sqrt{4^2 \times 12^2} = 12.65''$$

the small pattern radius r, is obviously drawn through point c, on the line B—C.

The circular measurement $2 \times S$, is the circumference of the cone erected, or $2 \times \pi \times AB$, and may be laid out in inches;

$$2 \times 3.1416 \times 4 = 25.13''$$

or it may be described in degrees. The total circumference of the pattern would be: $2 \times \pi \times R$ or 79.48", which is 360 degrees. The segment $2 \times S$, is a portion of the total circumference or:

$$2 \times S = \frac{25.13 \times 360}{79.48} = 113° 45'$$

The cones are formed and welded, then the rings and blank discs are assembled together with the spacing rods k, and the element is mounted in the pipe chamber as shown. The rings should be machined to as near a watertight fit as practicable, though ease of sliding into place is more important than prevention of leakage along the wall of the pipe chamber.

If sample connections are required, they may be placed as shown in Detail 3. The positions of these sample connections in a vertical plane is important. For example, where gasoline is contacted with sulphuric acid for reduction of sulphur content, if the samples were taken from the bottom of the chamber, they would contain the concentrating sludge or a progressive increase of sulphur in the gasoline samples. In some cases, a vertical position, with either upward or downward flow may be more desirable than a horizontal position for the mixer.

No Need to Fear Shortage of Low Priced Fuel Oils

NEW YORK, July 14.—Assurance of an ample supply of fuel oil for domestic heating requirements of the future was given today by R. G. Stewart, director of the Standard Oil Co. (New Jersey), supervising domestic marketing.

Last year, furnace oil of the grade used in hundreds of thousands of small installations sold in the metropolitan area at 6½ cents to 7 cents a gallon. With the completion of the 1933-34 heating season, all of the fuel supply companies have recently submitted new contracts to their customers guaranteeing prompt delivery of the quantities required for the 1934-35 season at a maximum price of 8¾ cents a gallon. This created a widespread impression that this country was facing a shortage of heating oil, with a prospective price rise of perhaps 2 cents a gallon. A requirement of the code approved by Secretary Ickes is that the top price quoted in a contract shall be not less than 25 per cent more than the posted price on the date a contract is signed. As this figure was 7 cents when the contracts went out the maximum price had to be made 8¾ cents. Indications are that the advance will not exceed one-half cent per gallon.

Mr. Stewart said:

"The surplus on the West Coast was built up despite the shutting in of a large amount of heavy crude production. Fields like Midway, Coalinga, Elk Hills and others could produce 100,000 bbls. of oil per day more than they are now yielding, and this for an indefinite period if demand warranted it. It needs only a small increase in price to change the relative position of numerous factors entering into supply.

"Outside of this big reserve on the Pacific Coast, the United States need not suffer from any deficiency in its own domestic supply while it has the tremendous proven resources in South America. Importations from Venezuela and Colombia have been artificially held down, both by dictum of the Federal Government, which asked for and received a promise on the part of importers not to bring in more than 35,000,000 bbls. of oil per annum, and by the imposition of an import duty of 21 cents a barrel on the crude and fuel oil allowed. In the event of a threatened shortage in the domestic supply, the Government could alter its program to the extent necessary to restore equilibrium in the domestic markets.

Octane Value of Cracked Gasoline Improved by Controlling the 50 Per Cent Distillation Point

By NEIL WILLIAMS
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., July 14.—The importance of the 50 per cent point as the controlling factor in cracking operations for low endpoint and high octane finished gasolines was clearly indicated in a succession of actual operating runs recently made by one of the Gulf Coast's larger independent refining companies. In fact, an analysis of the results of the runs was sufficiently conclusive to prove to that refiner that control of the middle point, having a direct relationship to the octane value, should be of sole concern, leaving the initial boiling point and endpoint to take care of themselves or be brought to specification by blending.

This analysis was made by this refiner in an effort to ascertain why the benzol equivalent of the gasolines manufactured at its plant over a period of a little over two years had decreased from a top of between 84 and 90 per cent to a point as low as 65 per cent. Five different operating periods, pictured in the five distillation curves shown on an accompanying graph, were studied in forming a basis for the above conclusions. Various crudes and charging stocks were used during these periods but the subject is confined to crudes producing a yield of gasoline of 22½ per cent or more. The runs were made on Holmes-Manley vertical stills but it is believed that as good results could be obtained by similar application of the theory to other units.

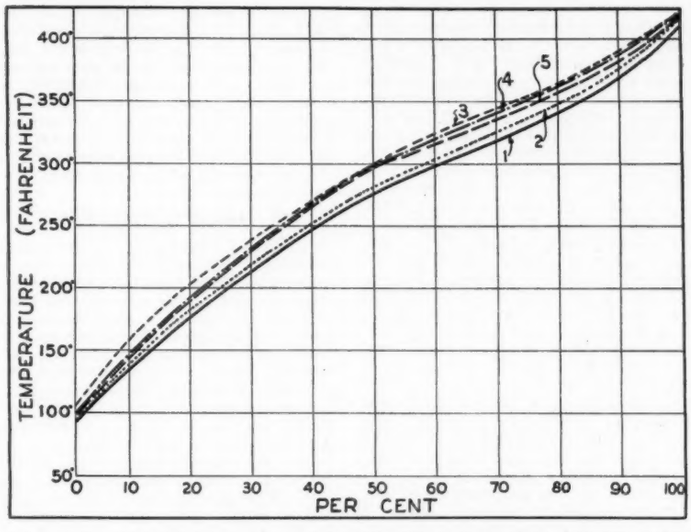
Operating Conditions

Reference to the accompanying graph is made in the study of the results of the various operating conditions considered. Curve No. 1 represents the gasoline made during the first period in which the 50 per cent point was used as the control. This point was 277° F. The charging stock consisted of 30 per cent crude, 25 per cent gas oil and 45 per cent recycled gas oil. The oil was charged at a rate of from 85 to 90 bbls. an hour with the unit operated at 400 pounds pressure with the preheater outlet at 860 degrees, and still middles 990 degrees. The benzol equivalent of the gasoline produced ran from 82 to 90 per cent and much of the time at from 84 to 90 per cent.

Curve No. 2 represents the distillation of the gasoline made in the second period. In this the 50 per cent point was continued as the control but the point was increased from 277 to 284 degrees. The same blend and grade of charging stock was used as during the period represented by Curve No. 1, and the stills were operated with the same pressures and temperatures, etc. However, the records showed that the benzol equivalent ran from 75 to 82 per cent, although most of the time it was between 80 and 82 per cent. This was from 2 to 5 per cent less than for the gasoline in Curve No. 1, in which the middle point was 277 degrees.

It then was decided to make the endpoint the control and blend natural gasoline to take care of the middle point. This period of run is represented by Curve No. 3 in the graph. In that operation the pressure was changed to between 220 to 250 pounds, the preheater outlet temperatures to 825 to 850 degrees and the middles 800 to 850 degrees. The charging stock was only slightly altered, it being 30 per cent crude, 30 per cent gas oil and 40 per cent cycle gas oil.

The benzol tests of the battery samples from that run were 72 to 75 per cent. After this naphtha was treated the benzol equivalent ranged from 71 to 73 per cent, and after blending the gasoline with 10 to 12 per cent natural to make the middle point 284, the benzol equivalent was from 69 to 72 per cent, which was considerably less than for gasolines refined in either the first or second periods.



Comparison of boiling ranges of gasoline made in five different operating runs of a Gulf Coast refiner to determine the cause of a decrease in the octane value of the products. In the five major changes of operation reflected in the curves shown there was a lowering of the octane number

1. Distillation curve of gasoline made with 277° middle point control. In this operation I.B.P. and E.P. are brought to specification by blending.
2. Distillation curve of gasoline made with 284° middle point control.
3. Distillation curve of gasoline made with 418° E.P. control—leaving middle point to be brought to specification by blending. 50% point, 300°.
4. Same as No. 4 except different charging stock used. 5. Distillation curve of rerun gasoline from 450°-460° E.P. control P.D., finished gasoline rerun and blended to 418° E.P. Middle point 300°

As the supply of crude of the type used in the charging stock for the first three mentioned periods was running low, another crude, having a slightly higher benzol equivalent was substituted for most of the charging stock in the fourth run, represented in Curve No. 4 on the graph. The charge consisted of a blend of 65 per cent of the new crude, 5 per cent original crude and 30 per cent cycle gas oil. The unit in this case was operated at a pressure of 225 to 260 pounds with the preheater outlet temperature 840 to 860 degrees and the middles 800 to 850 degrees.

In this operation the control again was the endpoint, which was 418 degrees. From this, the daily benzol tests from the battery samples ranged from 70 to 72 per cent, with a benzol equivalent of the finished gasoline after treating and blending with 10 to 12 per cent natural to correct the middle point was only 68 to 70 per cent.

During the fifth period under observation, a rerun plant was put in operation and the Holmes-Manley vertical stills were run to make a pressure distillate of 450 to 460 endpoint, which was to be brought down to 416-418 endpoint specifications by treating and rerunning. In the run there was no change in the charging stock but the temperatures of the Holmes-Manley stills were changed to a preheater outlet temperature of 855 to 865 degrees with the middles at 900 degrees.

Using the same charging stock as in the fourth period the benzol equivalent of the finished product ran from 68 to 70 per cent, while with the original charging stock the finished product tested from 65 to 66 per cent.

Conclusions

Summing up the results of the various operating runs as pictured in the five different periods are the following conclusions:

1. In increasing the 50 per cent control point from 277 to 284 degrees as was done in the second period the benzol equivalent was slightly decreased. In both the first and second periods, the middle point was the sole control, the initial boiling point and the endpoint being brought to specification by blending the finished gasoline with natural gasoline.

2. With 416-18 endpoint as the control, which resulted in an increase in the middle point to from 295 to 300 degrees, there was a further decided decrease in the benzol equivalent. In this case, the middle point was brought to specification of 284° F. by blending.

3. The benzol value of the finished products can be determined by control of the middle point in distillation. In a specific instance listed above, a benzol product of 68-72 per cent should be obtained by a middle point control of 284° F.

It has not been generally recognized that the middle point in distillation could be used exclusively for the control because general practice is to control by the initial boiling point and endpoint and blend the intermediate points to specification. By the above this practice sacrifices the benzol value of the product. The analysis shows that the latter can be conserved or increased by a reversal of the common practice to use only the middle point as the control in distillation, the most efficient middle point to be determined by the type of charging stock.

More Wells Drilling in June Than May, But Rig Building Was Hit by Strikes

June field work in the states east of California resulted in an increase of 46 completions and a net increase of 14 in drilling wells, or a gross gain of 60 in wells drilling in the course of the month as compared with the situation in May.

The rig builders' strikes in Kansas, Oklahoma, and Texas resulted in a falling off of 100 in new rigs, but this means only a delay which will be made up later when the strike bug gets out of the collective systems of the husky rig builders. Following is the general summary of field operations:

Wells Completed

	Comp.	Prod.	Dry	Gas
Penna. Grade fields	222	2,075	8	38
Lima	17	164	9	2
Central Ohio	65	626	14	30
Indiana	21	395	11	1
Illinois	1	0	1	0
Kentucky	18	229	7	1
Michigan	44	21,957	7	5
Kansas	71	25,940	19	1
Oklahoma	155	55,759	48	5
North Central Texas	214	19,163	81	0
West Texas	40	220,649	6	1
East Central Texas	16	930	7	1
East Texas	341	21,249	5	1
East Texas gas area	2	0	2	0
Texas Panhandle	33	7,527	3	4
Southwest Texas	98	11,485	48	10
Texas Gulf Coast	100	36,234	43	4
Louisiana Gulf Coast	29	18,044	11	9
North Louisiana	33	1,022	10	13
Arkansas	9	760	4	0
Alabama	1	0	1	0
Mississippi	4	0	2	1
Montana	18	858	2	4
Wyoming	7	70	3	1
Colorado	2	0	1	1
New Mexico	10	7,648	3	0
Total June	1,572	452,784	357	124
Total May	1,526	415,261	359	98
Difference	46	37,523	2	26

Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Pennsylvania Grade fields	85	213	298
Lima	3	29	32
Central Ohio	28	135	163
Indiana	1	38	39
Illinois	1	11	12
Kentucky	2	40	42
Michigan	99	144	243
Kansas	44	188	232
Oklahoma	105	422	527
North Central Texas	81	206	287
West Texas	47	120	167
East Central Texas	15	27	42
East Texas	48	284	332
East Texas gas area	1	11	12
Texas Panhandle	44	127	171
Southwest Texas	28	125	153
Texas Gulf Coast	30	182	212
Louisiana Gulf Coast	21	88	109
North Louisiana	32	91	123
Arkansas	8	36	44
Alabama	0	3	3
Mississippi	2	13	15
Montana	13	57	70
Wyoming	13	67	80
Colorado	5	32	37
New Mexico	14	60	74
Utah	1	14	15
Total June	771	2,763	3,534
Total May	871	2,749	3,620
Difference	100	14	86

Operating Manual for Specific Pool to Conserve Common Reservoir Energy Suggested Solution

"Why," a newspaper asks, "if unitization is the most scientific principle for developing oil fields, are not all pools operated on that basis? And why is not the law of common ownership recognized by the courts instead of the old law of capture?"

The answer is not an easy one to arrive at, says The Lamp, published by the Standard Oil Co. (New Jersey). It is necessary to understand the conflict between unit operation and the old concept of every-man-for-himself-and-devil-take-the-hindmost.

The ancient law of capture holds that oil is like wild game or running water. So drillers raced for oil with as many wells as their leases would hold. The last man to reach the pay sometimes found it dry—his own oil drained from under his lease through the wells surrounding his property.

The unit theory proposes that, so far as lease obligations permit, only enough wells be drilled to drain the oil in the most efficient manner. This presupposes that all the oil and gas in a pool is owned in common.

If the Golden Rule governed the oil business and there were no conflicting royalty interests, all fields would be developed on some form of the unit scheme. Since selfishness is among the strongest of human characteristics, it is only when the individual sees advantage in concerted action that he co-operates for the common good.

In the face of selfish aims and get-rich-quick bubbles, proposals that immediate profits be sacrificed in favor of reduced waste, greater ultimate return and the stabilization of the industry as a whole made little headway.

Moderate Dividend Preferable

But time and experience overcome more prejudices than logic. With depression many farmers who owned acreage in oil country came to realize that a moderate dividend regularly over a period of years adds up to more than quick speculative profits—that 5 bbls. of dollar oil is more profitable than 40 bbls. at a dime. Drilling contractors and equipment manufacturers who analyzed their operations found it more profitable to put down one well and be paid for it than to drill a dozen which, through overproduction, increased lifting costs and demoralized prices, broke everyone concerned. A growing number of royalty owners began to realize not only that payments on 10-cent oil were pretty slim, but that their investment played out through over-drilling and wasteful production methods.

Inescapable as these conclusions are, the industry has had a hard time assimilating them. Expe ience with unit operation has now reached the point where figures are available to compare with results in fields developed under the old methods. But it is slow work. Oil fields vary. There are honest differences of opinion as to how they can be most efficiently produced. Royalty interests as well as those of the operators must be unitized. And in order to accomplish all this it is necessary to show that the ultimate net return in dollars and cents is greater if the oil is taken out at a lower rate which conserves the reservoir energy.

In any case it is possible to agree on certain underlying principles. To that end let us see how the law of common ownership has fared.

Laws reflect the sentiment of the day and many statutes are the product of emotion rather than of considered judgment. When a majority becomes aroused, opposition of organized minorities is overridden. To an increasing extent the principle of conservation of oil and gas is coming to be recognized by the courts. Yet the old law of capture in its essence is still the rule of property in all producing states.

Theory and Practice

In some jurisdictions it is held that a landowner, or his lessee, has absolute title to the oil and gas in place under his land. In practice this has proved to be nothing more than a legal fiction. In other jurisdictions it is held that the only right a landowner or lessee has is to appropriate the oil and gas that comes from his wells—which is a clear statement of the rule of capture.

The practical application of this rule may be seen in a typical case.

A dozen landowners, or their lessees, decide to unitize their properties in a pool. This can be done either on a so-called acreage basis, or an oil-content basis. Oil in a pool is not evenly distributed. The properties on top of the structure where the sand is thickest are more valuable than those along the edge. It is to the advantage of the marginal landowner to have his interest in the pool established on a basis of his surface holdings, for in this way he obtains more than his real share of the oil.

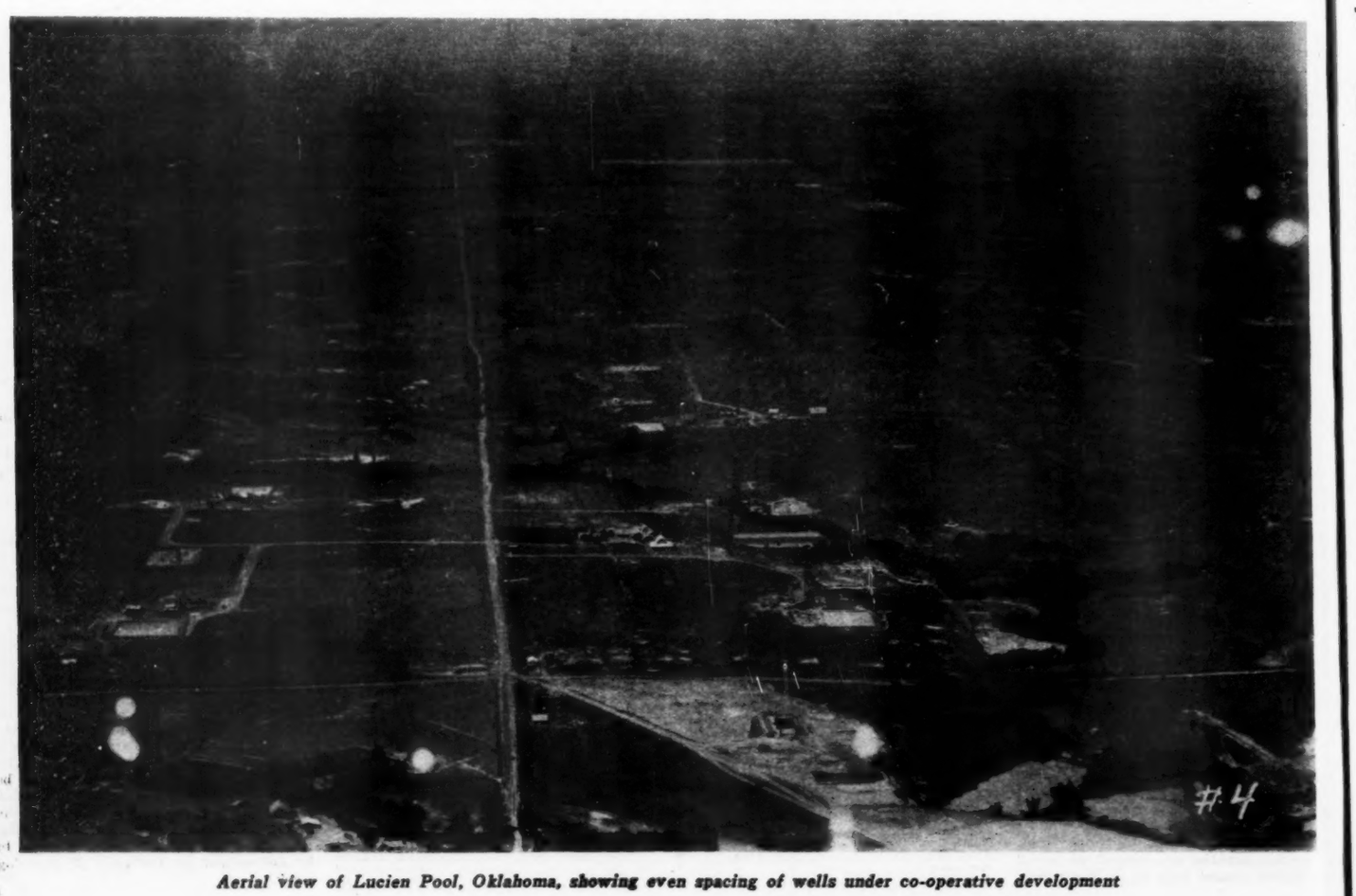
The equitable principle on which either unitization of a pool or proration of state allowables among the various operators in a field should be based is that each landowner is entitled to the oil actually underlying his property. There is no infallible method of determining this, though it has sometimes been done with a reasonable degree of accuracy. But if the allocation were disputed it would be difficult to defend it, in the face of conflicting expert testimony, against an operator depending on the rule of capture.

There is, however, another way out.

When the law of capture was accepted in the early days of the industry there was little conception of the function of reservoir energy. Operators knew that gas was highly fugitive and that oil underground could migrate. But the real importance of reservoir energy—particularly gas energy—did not come to be recognized by the industry until a decade ago.

The wastage of this force on one lease is at the expense of every other operator in the field, since everyone is interdependent upon common reservoir energy. Consequently, any reasonable regulation designed to bring this about is sustainable in principle.

Today the courts have a definite and controlling understanding of reservoir



Aerial view of Lucien Pool, Oklahoma, showing even spacing of wells under co-operative development

energy. Time was required to bring this about, but now decisions in California, Oklahoma, Texas and of the Supreme Court of the United States are in harmony. They go to the greatest lengths in upholding the police power of the state to adjust and regulate the operation of oil properties in the interest of all the operators in a pool. Fundamentally, this high degree of regulation stands on the foundation of the common nature of reservoir energy.

How does this affect unitization? Compare the results attainable under such control, entirely within constitutional grounds, with that aimed at by unit development:

(a) Such regulation could provide for uniform well spacing throughout the pool, adapted to the conditions prevailing.

(b) By taking care of lease expirations and offset obligations it could plan for orderly drilling throughout the pool.

(c) The rate of production may be adjusted to market demand, and furthermore can be limited in such a way as fully to conserve the reservoir energy and enlarge the ultimate recovery from the pool.

(d) Waste of reservoir energy would be prohibited. In fact, it is probable that any reasonable provision for the efficient and proper utilization of reservoir energy would be upheld in the courts.

So in the last analysis practically every principle that would obtain in the case of common ownership could be brought into play through operating manuals for specific pools, adapted to their particular conditions, reasonable in their effects and imposed by state authority on the legally established principle of the common nature of reservoir energy.

On this basis a statute authorizing a majority, in number and ownership, of the operators in a pool to agree upon and submit for the approval of a conservation agency such an operating manual, would probably stand every test of constitutionality. Such a manual, if approved and if reasonable in its terms, would in itself be constitutional.

Think Muskegon Gas Line Assured by New Producer

MUSKEGON, Mich., July 16.—American-Michigan Pipe Line Co. and Muskegon Gas Co., subsidiaries of the American Light & Traction Co., are preparing to start construction of their proposed new 55-mile line from the Austin Township, Mecosta County, gas field to Muskegon and Muskegon Heights at a cost of about $500,000. Michigan Public Utilities Commission last week approved a final rate schedule further reducing the base rate for a minimum bill from a schedule recently announced in The Oil and Gas Journal from 80 to 75 cents for the first 300 feet used. All other steps remain the same.

The commission also issued a certificate of public convenience and necessity to lay the new line as soon as Taggart Brothers, Inc., of Big Rapids, complete their seventh well, a test to the Michigan gas sands which struck the pay at 1,321 to 1,324 feet with a flow of about 1,500,000 feet a day from a 3-inch core drilled hole and estimates of up to 10,000,000 daily potential when drilled in with full-sized hole. It was being drilled in with cable tools as the week closed.

Muskegon companies specified the well must make at least 4,000,000 feet at a depth about the same as the No. 1 well. Formations checked within 1 foot of the depth was encountered in No. 4 Robert S. Fish well last January. Edward L. Fischer, United Light & Power Co., engineer, of Davenport, Iowa, will have charge of laying the line.

GEOLOGIST DIES IN MEXICO

LAREDO, Tex., July 16.—Wounds inflicted probably by a mountain lion, caused the death Saturday of Patrick Thomas Henderson, 45 years old, Waco geologist. He was found unconscious, his right arm badly torn, near the village of Estacas, Mexico, Friday.

Mr. Henderson served in the World War with the Marine corps. He was an employe of Huastaca Oil Co.

Unitization Plan Proves Itself in Practical Tests; Marked Contrast With "Good Old Days"

By VANCE ROWE
Carter Oil Co.*

The mere statement that proration measures and unitization tactics are of great economic and social benefit to the oil industry is not enough for practical oil men. The development of oil is a hard business built on facts and ffigures, with results the only measuring stick.

Today there is so much recorded data on the matter that volumes of facts and yards of figures would be unable to digest the available material. But a few pointed comparisons on development will present a fairly fresh picture.

The Little River Pool of the Seminole area was discovered in 1927. In 30 days more than 100 wells were frantically drilling, with contractors waging a contest with one another to reach the sand. Reckless haste with mad confusion obliterated the reasoning knowledge that there is a producing edge to every pool. Maps show and records corroborate the fact that 40 dry holes were strung along the west side of Little River to determine the limits of a pool which turned out to be 6 miles long and 2 miles wide. These 40 dry holes were around 4,500 feet deep with an average cost of $50,000 per well. That is only one item of $2,000,000 charged to reckless drilling in a single pool. The identical situation could be multiplied many times.

Compare the Little River situation with the Lucien Pool—one of the newer fields in Oklahoma being largely developed under a unitized agreement plan.

Lucien, like Little River, is a long and comparatively thin pool and both produce most of their oil from the Wilcox sand. The discovery at Lucien was completed in October, 1932, and we find 18 months later that 25 wells have been completed with a combined capacity of 65,000 bbls. Proration and unitization provided a leisurely development which enabled the operators to study the situation and map out a program. This calm method of doing business resulted in only three dry holes being drilled on the west edge to practically prove the producing limits on that side. Three failures against 40 at Little River—in a situation affording a real comparison. It is a significant contrast in drilling practices.

A careful study by statisticians of the Mid-Continent Oil and Gas Association in 1930 on the Seminole City Pool resulted in a figure statement showing that under a unitization of working interests the pool would have shown a greater financial recovery to the tune of $32,500,000. Quoting from the report: "This statement does not account for additional profits from gasoline, nor possible increase in recovery, nor a better oil market from better control, nor that wider spacing of wells might have been adopted without lessening the recoverable oil."

Oklahoma City Example

In recent years the most destructive orgy of reckless drilling occurred in the very deep and very expensive Oklahoma City Field. If you like big figures, here they are:

The Wilcox zone at Oklahoma City has 500 wells, or one well to every five acres. In round numbers, the cost of these 500 wells is $60,000,000. The Wilcox sand is very porous and one well to 10 acres would have been ample for maximum recovery. In other words, half as many wells would have saved the operators a cool $30,000,000.

On top of this, a great many engineers would recommend one well to 20 acres at Oklahoma City—a $40,000,000 saving. There are a few—and their judgment is rated well—who would have drilled one well to 40 acres.

These important savings were possible under unitization. Instead, a high-powered drilling campaign swung into action. The casualty records show one case where a defenseless little 40-acre tract was riddled with 25 deep holes. In other words, a good time was had by all—up to the time reckless drilling encountered its old friend "dissipated gas energy."

Reckless drilling and dissipation of gas energy go together like two sailors on a jamboree after six months at sea. The headache is lifting costs, and if there is one thing that will start an oil man to muttering to himself it is the mention of lifting costs.

In the "good old days" big fields were sensationalized, with unrestrained gushers blowing their unmarketable oil all over the landscape or into expensive steel tanks where the crude lay for years undisturbed except by heavy evaporation losses and equally heavy taxes. In many cases of inadequate facilities the oil and gas flowed over and through the landscape to provide large picturesque fires for the public and equally brilliant losses for the oil business.

Cromwell Comparison

The Cromwell Pool, discovered in 1922, is a fair example of competitive operations in the "good old days." The Bureau of Mines investigated this field and found that 60 wells on top of the structure produced an average of 37,000 feet of gas to every barrel of oil.

From this lead reputable authorities made a detailed survey of the Cromwell situation and in a report stated highly competitive conditions had brought about some gigantic losses. It was pointed out that under unitization a saving of 84 wells might have been accomplished, the oil recovery per acre would probably have been doubled, royalty owners would have been paid $5,000,000 additional money and operating profits would have increased 170 per cent.

Conservation of gas energy and bottom hole pressures in the "good old days" were viewed as mysterious words whose meaning was clear only to gentlemen with long Van Dyke beards and dark glasses. Today the up to date oil man watches his pressures as closely as his bank balance.

The greatest dissipation of natural flow energy that has ever occurred in Oklahoma took place, strangely enough, in the deepest pool of the State. That was in the famous Oklahoma City Field. The frightful waste of gas there has been discussed so widely and so vigorously that it will probably be a legend to be handed down as a horrible example to the future oil men of the State.

Only last year an engineer for one prominent concern at Oklahoma City testified that his company's 20 wells had actually dissipated 4,000,000,000 feet of gas. The wells had a gas-oil ratio of 40,000 to 1. That is at least 20 times too much gas for 1 bbl. of oil.

Oklahoma City has produced 225,000,000 bbls. of oil. Many engineers believe it will ultimately make 350,000,000 bbls. Some say more. In any event it is well known that many of the wells are going prematurely to artificial lift. The lifting costs under natural flow was around 5 cents a barrel. Artificial lift will range from 25 cents upward. In other words, 100,000 bbls. daily should have been produced for a long time at $5,000 a day instead of $25,000 a day. That is important money in any language.

That conservation under unitization could have accomplished wonders at Oklahoma City no one will deny. In smaller pools the natural flow energy has been maintained for long periods of time.

Two pools in the Rocky Mountains, where control of operations made it possible to conserve energy, have shown startling results. The Sundance at Salt Creek, Wyoming, is flowing "under its own steam" again after eight years. The Hogback Field in New Mexico is still a flowing field after 10 years of production.

In the unitized Keokuk Falls Pool of the Seminole area, which is operated by the Carter Oil Co., a close study of conditions has resulted in producing tactics that have produced gratifying results. Wells were back pressured in a manner best fitted for their individual characteristics to arrive at an even pressure over the structure. After some months the company actually succeeded in increasing the bottom hole pressures of Keokuk Falls wells.

Wider spacing of wells and back pressuring to conserve flowing energy are without doubt the two most significant economic adjustments in the new era of producing oil. They are possible only under the administration of proration and unitization.

The Carter Oil Co. has played an active part in this great balancing program of the industry. Oklahoma oil men dealing with the Carter have come to recognize that the company conducts its business from the base of proration and unitization.

At the present time there are six oil pools in Oklahoma being developed under unitization methods. The Carter operates five of these pools in the Seminole area and is a participant in the other—the Lucien block operated by the Shell Petroleum Co. In the meantime the new idea of community tests is becoming increasingly popular and a representative group of concerns are included in the 15 community wildcats now being drilled in the State.

Among the newer flush pools in Oklahoma are Lucien, Crescent, Keokuk Falls, South Burbank and West Chandler. Although some of these pools are nearly two years old they are still in the early stages of development. A large portion of the wells are good for 5,000 to 10,000 bbls. a day. They have a present combined capacity better than 250,000 bbls. a day. Yet operations are conducted so leisurely that they rarely make the headlines. Turn them loose on a drilling contest with five-acre locations instead of 20 and 40 acres and you would have the same old trouble.

*From The Lamp.

A. J. BYLES ON AIR

Axtell J. Byles, president of the American Petroleum Institute, in a radio address over a nationwide chain, said: "I am inclined to believe that we cannot solve our tax problems by merely giving Government more money to spend. It would seem that vigorous protest and decisive action by tax-ridden citizens are necessary to point the way to the reduction of cost of Government to levels which we can afford. Reasonable taxes broadly distributed, such as would be the case under a general manufacturer's sales tax, and full collection of whatever taxes are levied, would put us on firm ground and restore confidence."

ROYAL DUTCH DIVIDEND

The Chase National Bank, as successor depositary of certain ordinary stock of Royal Dutch Co., has received a dividend of 6 guilders for each 100 guilders par value of the stock. This is the whole dividend for the year 1933. The equivalent distributable to holders of "New York shares" is $1.353 on each share, to be distributed on July 31, 1934, to the holders of record on July 17.

Economic Aspects of Solvent Refining in the Manufacture of Improved Lubricating Oils

By ROBERT E. WILSON[1] and P. C. KEITH, Jr.[2*]

Extensive research during the past 10 years has resulted in practically universal agreement among oil technologists that the four most important properties of a motor oil from a standpoint of quality are as follows (the order of arrangement having no significance):

Low Carbon Forming Tendencies

This, of course, means less carbon deposit in the engine, which minimizes detonation and obviates the necessity for frequent carbon removal. Carbon forming tendencies in the oil have ordinarily been judged on the basis of the so-called Conradson carbon test, but recent information[3] indicates that actual carbon formation in the engine is probably more directly related to the volatility of the heavier portion of the lubricating oil.

Low Pourpoint

Contrary to a popular impression, the pourpoint is not in any sense an indication of the minimum temperature for easy starting, but it does indicate rather closely the minimum temperature at which oil will flow through the screen on the suction side of the oil pump and hence to the various parts of the engine to be lubricated. Since even momentary failure of the oil supply during cold starting is a frequent source of damage to the engine, it is important that the pourpoint be as low as the temperature at which an engine could be expected to start on the oil in question. Pourpoints lower than this have no practical significance.

High Viscosity Index

Since motor oils must operate over a wide temperature range it is important that their viscosity change as little as possible with variation in temperature. This property is ordinarily measured in terms of the Dean and Davis Viscosity Index[4] and oils which have a high viscosity index tend to give easier starting at low temperatures and lower consumption in high temperature operation than oils of the same viscosity at standard temperature but lower viscosity index.

Resistance to Oxidation

It has been recognized for some time that the formation of sludge in automobile engines, and the sticking of rings, etc., is due largely to the oxidation of certain constituents of the motor oil; but it is only recently that an oxidation test has been developed[5] which appears to correlate closely with the behavior of oils in service. A high resistance to oxidation means a long life for the motor oil and a minimum of ring sticking. The prevention of ring sticking also results in better consumption characteristics in long service.

It is also rather generally agreed that other tests upon which considerable stress used to be laid, such as gravity, fire and flashpoints, color, etc., lack any practical significance except as they may be indirect indications of some of the four above mentioned properties.

If, however, the attempt is made to evaluate the relative practical importance of the four above mentioned properties, serious disagreement is encountered. This is due partly to the fact that the relative importance of the different properties varies with the season and with the engine, but probably more to the fact that refiners who make their motor oils from Coastal and California crudes have long emphasized the properties of low pourpoint and low carbon forming tendencies in which their product has always excelled, whereas Pennsylvania refiners have emphasized low consumption, easy starting and stability in service, which we now know are largely determined by the second two properties of viscosity index and resistance to oxidation. Refiners of Mid-Continent crude have tended to emphasize balanced quality, since their oils have been reasonably good in all four respects, though generally not up to the maximum in any single property.

As long as no one of these groups of refiners was able to duplicate the talking points of the others, it might be expected that the disagreement would continue indefinitely; but even before the advent of solvent refining, progress was being made in the difficult problem of refining oils in such a way as to obtain properties not inherent in their respective crudes. Thus, Mid-Continent and Pennsylvania refiners soon found it possible and desirable to obtain minimum pourpoints for the various grades, either by more complete dewaxing or by the use of pourpoint depressors. Mid-Continent refiners generally tended toward the use of more distillate oils and less bright stocks in their oils, which further reduced their carbon forming dendencies; but the dewaxing of the heavier distillates was not satisfactorily solved until the advent of solvent dewaxing as discussed later. However, it was not economically feasible for the Coastal refiner to approach the stability or viscosity index of Pennsylvania oils nor for the Pennsylvania refiner to approach the low carbon forming tendencies of Coastal oils. Accordingly, prior to the advent of solvent refining, no single crude would yield an oil meeting the customary maximum standards for all four of the important properties of a motor oil.

The development, and particularly the commercial adoption, of solvent refining, has been due to a very considerable extent to the development of accurate measures for the two properties in which Pennsylvania oils excel. Accurate measures for the other two properties of pour test and carbon residue in which Coastal oils excel, were developed much earlier. As a result, the definitely better performance given by Pennsylvania oils under severe conditions had for many years to be attributed to some mysterious factor connected with the state in which the oil originated or the number of million years of aging it had undergone. When reliable measures were deveoped for viscosity index and resistance to oxidation the Pennsylvania refiners' claims to superiority were put on a much sounder basis, but at the same time these tests greatly stimulated attempts to produce these properties in equal degree from less expensive crudes. Even the chemists who claim to be able to age whiskey in a few days might well hesitate before attempting to duplicate the effects of millions of years of aging, but once the mystery was banished and concrete properties substituted, rapid progress was made in equaling or excelling these characteristics from a variety of crudes.

Points of Difference

A particularly important stimulus to work on solvent extraction was the development of the concept of viscosity index. In 1928 Hill and Coats[6] coined the term "Viscosity-Gravity Constant" (V.G.C.) by means of which naphthenic and paraffinic oils could be distinguished. In 1929 Dean and Davis[4] proposed the term "Viscosity Index" and arbitrarily assigned values of 100 and 0 to oils made from extreme types of crude, the extremes being Pennsylvania on the one hand and certain Gulf Coast crudes on the other. While this system is open to some criticism and may soon be replaced by a better criterion, its simplicity and the fact that it gave the figure 100 as a mark to shoot for, led to its wide adoption and to a great stimulation of research on solvent extraction.

Whereas solvents had previously been compared largely on the basis of results obtained as to yield, color, and the stability of the finished oil, they now began to be compared largely on the basis of whether or not they would give oils of viscosity index approaching 100. It was soon found that quite a number of solvents could be used to produce, from some asphalt-base crude and from practically any mixed-base crude, oils with a viscosity index equal to or better than that of Pennsylvania oils. Service tests further showed that such solvent refined oils, given the usual finishing treatment, also equaled or exceeded Pennsylvania oils in resistance to oxidation and performance in service. This has resulted in a growing unanimity as to what constitutes the desirable properties of motor oils. True, there still exist disagreements as to whether the oil should be a distillate or a residuum, a wide or a narrow cut, but in general refiners are producing or planning to produce a line of oil which will combine 100 V.I. low carbon residue, low pourpoint with excellent sludging and oxidation properties. Whether all these properties in maximum degree are essential to a satisfactory motor oil is still open to some question; but since solvent extraction opens the way for any refiner to make, from a wide variety of crudes, oils meeting or excelling in laboratory inspections all points of previously claimed superiority, the "solvent extraction race" is on.

Reasons for Expansion

Other and very valid reasons have been advanced to explain the rapid expansion of solvent extraction, such as:

1. The desire to produce oils of unvarying quality irrespective of the crude source.
2. The desire to minimize acid treating losses and sludge disposal problems.
3. Actual need for a better oil, as regards ease of starting, sludging tendencies, and consumption characteristics, because of larger motors operating at higher speeds and temperatures.

While the above reasons are contributory to the expansion of solvent extraction it is probable that the effect of competition is much more important. It is the object of this paper to outline in a very general manner the probable economic results which will follow the widespread use of solvent refining.

Commercial Development

The first commercial solvent extraction process was that of L. Edeleanu utilizing liquid SO_2 as the solvent. The process found its most general application in the refining of burning oils and kerosene. In 1927 the first such plant for lubricating oil was installed by the Associated Oil Co. of California. The oils

TABLE 1—SOLVENT EXTRACTION PLANTS IN OPERATION

Company and refinery—	Kind of solvent	Capacity of finished oil (bbls./day-42's)
1. Associated Oil Co., Avon, Calif.	SO_2	1,500
2. Shell Oil Co., Martinez, Calif.	SO_2	1,500
3. Imperial Oil Co., Sarnia, Ontario	Phenol	2,000
4. Tide Water Oil Co., Bayonne, N. J.	SO_2	1,500
5. Standard Oil Co. (Indiana), Casper, Wyo.	Dichlorethyl ether (Chlorex)	500
6. Standard Oil Co. (Indiana), Wood River, Ill.	Chlorex	1,000
7. Mid-Continent Petroleum Corp., Tulsa, Okla.	Chlorex	150
8. Indian Refining Co., Lawrenceville, Ill.	Furfural	1,500
9. Standard Franco-Americaine de Raffinage, Port Jerome, France	Phenol	1,600
10. Union Oil Co., Oleum, Calif.	SO_2*	1,500
11. ———	Chlorex	1,000

*In process of conversion to SO_2-Benzol.

TABLE 2—SOLVENT EXTRACTION PLANTS UNDER CONSTRUCTION

Company and refinery—	Kind of solvent	Capacity of finished oil (bbls./day-42's)
1. Atlantic Refining Co., Philadelphia, Pa.	Nitrobenzene	1,000
2. Gulf Refining Co., Girard Point, Pa.	Propane-Cresylic Acid	1,500
3. Magnolia Petroleum Co., Beaumont, Tex.	Propane-Cresylic Acid	2,200
4. Sinclair Refining Co., Wellsville, N. Y.	Nitrobenzene Sulphuric Acid	800
5. Standard Oil Co. of California, Richmond, Calif.	Aniline Oil	2,200
6. Standard Oil Co. of New Jersey, Bayonne, N. J.	Phenol	1,000
7. Vacuum Oil Co., Paulsboro, N. J.	Propane-Cresylic Acid	1,500

TABLE 3—SOLVENT DEWAXING PLANTS IN OPERATION

Company and refinery—	Kind of solvent	Capacity of finished oil (bbls./day-42's)
1. Indian Refining Co., Lawrenceville, Ill.	Benzol-Acetone Toluol	1,000
2. Standard Oil Co. (Indiana), Wood River, Ill.	Propane	1,200
3. Standard Franco-Americaine de Raffinage, Port Jerome, France	Trichlorethylene	700

SOLVENT DEWAXING PLANTS UNDER CONSTRUCTION

Company and refinery—	Kind of solvent	Capacity of finished oil (bbls./day-42's)
1. Union Oil Co., Oleum, Calif.	Propane	1,800
2. Atlantic Refining Co., Philadelphia, Pa.	Benzol-Acetone-Toluol	600
3. Standard Oil Co. of Louisiana, Baton Rouge, La.	Mixed Chlorinated Solvents	1,800
4. Shell Petroleum Corp., Wood River, Ill.	Propane	2,500

*Presented before Pittsburgh meeting of A.P.I.

[1]Vice president, Standard Oil Co. (Indiana).

[2]Vice president, M. W. Kellogg Co.

[3]W. H. Bahlke and others: "Factors Controlling Engine Carbon Formation," S.A.E. Journal, Vol. 29, No. 3, September, 1931, p. 215.

[4]Dean and Davis: Viscosity Variations of Oils with Temperature; Chem. & Met., Vol. 36, October (1929) p. 618.

[5]D. P. Barnard and others: Causes and Effects of Sludge Formation in Motor Oils; S.A.E. Journal, Vol. 34, May, 1934, p. 167.

[6]Hill and Coats: "The Viscosity-Gravity Constant of Petroleum Lubricating Oils"; Ind. Eng. Chem., Vol. 20, June, 1928, p. 641.

produced had good sludging and oxidation characteristics but a low V.I. The commercial extraction of lubricating oils in this country began with this plant. Installation of this plant might have been expected to stimulate commercial activity in this field, but it really had the opposite tendency because the solvent effect of SO_2 was too low to even approach the characteristics of Pennsylvania oils; and since SO_2 was known to be about the best solvent for refining of kerosene it was commonly assumed that since SO_2 did not give Pennsylvania quality motor oils no solvent could be expected to do so.

In 1930 the Imperial Oil Co. installed at Sarnia, Ontario, a phenol extraction plant to treat Colombian distillates. The operation proved very successful and was described by Stratford, Moore and Pokorny in 1933[7]. In 1931, Ferris, Berkhimer and Henderson[8] published their results on the relative ability of some 110 solvents to improve the V.G.C. of various oils. In 1932 Standard of Indiana installed at Casper, Wyo., the first Chlorex extraction process. Also, Ferris and Houghton[9] described in a number of articles the results to be expected from nitrobenzene. The modifications made to the Edeleanu process to use a solvent consisting of SO_2 and benzol were outlined by Cottrell[10].

The publication of these articles on solvent extraction were indicative of the interest being aroused. In 1933 the number and scope of papers dealing with the same subject enormously increased. A casual survey of the 1933 publications reveals 17 articles[11] dealing with solvent extraction and dewaxing. A more careful search would undoubtedly reveal several more. The rapidity with which solvent extraction has advanced and is advancing is shown by the fact that of the 12 articles presented before the Refining Group at the November, 1933, meeting of the A.P.I., 8 dealt with solvent refining.

Three General Classes

In considering the entire field of solvent refining it seems desirable to divide the processes into three general types, as follows:

1. Solvent dewaxing, including the acetone-benzol process, centrifugal dewaxing with chlorinated solvents, and the use of propane as a combined refrigerant and diluent for dewaxing various types of oils.

2. Solvent extraction processes, which should be further subdivided into (a) single solvents such as phenol, Chlorex, nitrobenzene, furfuraldehyde, and SO_2, the latter with or without benzene; and (b) double solvent processes which extract the oil in a solution of a light hydrocarbon, in particular propane, on account of its tendency to throw out asphalt. Double solvent processes may employ any of the above mentioned single solvents, but the present commercial installations utilize cresylic acid as the second solvent.

3. Deasphalting processes employing liquid propane or similar very light hydrocarbons. These are not classified as single solvent processes because the ordinary single solvents dissolve the more naphthenic and asphaltic constituents and leave behind the paraffinic, whereas propane alone at ordinary or slightly elevated temperatures tends to dissolve the paraffinic and most of the naphthenic constituents but throw out the asphaltic materials. It also appears to make its separation more on the basis of boiling points than of paraffinicity, although it is somewhat selective in the latter respect.

[7]World Petroleum Congress, London, July 19, 1933.
[8]Industrial Eng. Chem. 23, 753, 61 (1931).
[9]Refiner and Natural Gasoline Mfr. 11, No. 11, 560-7, 581-3 (1932); The Oil and Gas Journal, 31, No. 25, 65-71, 96 (1932); National Pet. News, 24, No. 48, 25-32 (1932); Proceedings, A.P.I., 13, 3, 82 (1932).
[10]Cottrell, Proceedings, A.P.I., 13 (3), 94 (1932).
[11](a) Stratford, Moore and Pokorny, National Pet. News, 25-13 (1933); Stratford, Moore and Pokorny, The Oil and Gas Journal, 31, No. 45 (1933); Stratford, Moore and Pokorny, World Petroleum Congress, London, July 19-25 (1933). (b) Page, Buchler and Digga, Ind. Eng. Chem., 25, 418 (1933). (c) Bahlke, Giles and Adams, Proceedings, A.P.I., 14M (3), 16 (1933). (d) Graves and Bryant, Proceedings, A.P.I., 14M (3) 7 (1933). (e) Poole and Wadsworth, Proceedings, A.P.I., 14 (3), 39 (1933). (f) Manley, McCarty and Gross, Proceedings, A.P.I., 14 (3), 47 (1933). (g) Cottrell, Proceedings, A.P.I., 14 (3), 60 (1933). (h) Ferris, Myers and Peterkin, Proceedings, A.P.I., 14 (3), 63 (1933). (i) Bahlke, Brown and Diwoky, Proceedings, A.P.I., 14 (3), 77 (1933). (j) Tuttle and Miller, Proceedings, A.P.I., 14 (3), 85 (1933). (k) Stratford, Pokorny and Huggett, Proceedings, A.P.I., 14 (3), 90 (1933). (l) Bray, Swift and Carr, Proceedings, A.P.I. 14 (3), 96 (1933). (m) Hunter and Nash, World Petroleum Congress, London, July 19-25 (1933). (n) Saal and Van Dyck, World Petroleum Congress, London, July 19-25 (1933). (o) Pester, Proceedings, A.P.I., 14M (3), (1933).

TABLE 4—COMPARISON OF TYPICAL COSTS FOR CONVENTIONAL OPERATIONS vs. SOLVENT REFINING

30% (440° Flash) M.C. Reduced Crude to Finished Lubricating Oil.

Operation—	Loss on individual operation	Cumulative yield	Cost per gal. of stock fed to the operation (cents)	Cost of operation per 100 gal. original feed	Total cumulative cost, 100 gal. original feed
Acid treating (50 lbs., 98% acid/bbl. at $12/ton)	30%	70.0%	87	$0.87	$0.87
Degradation loss*	....	.....	...	0.45	1.32
Neutralization and decolorizing	4%	67.2%	1.5	1.05	2 37
Centrifuge dewaxing	20%	53.8%	2.0	1 34	3 71
Cost of above operations per 100 gallons of finished lub					$6.92
Solvent extraction	35%	65.0%	1.07	$1.07	$1 07
Acid treating (10 lbs./bbl., 98% acid)	5%	61.5%	29	.19	1 26
Degradation loss*	....	.....	...	.12	1 38
Neutralization and decolorizing	4%	59.0%	1.25	.77	2.15
Solvent dewaxing	20%	47.2%	1 0	0.59	2.74
Cost of above operations per 100 gallons of finished lub					$5.80

*Assuming feed stock worth 2.5 cents, extract 2.0 cents and sludge 1 cent per gallon.

The surprising properties of liquefied propane, which until recently has been considered by the petroleum industry as a gas, are brought out by the fact that it has an important place in each of the above mentioned three types of processes and has also been found to be a desirable solvent in which to acid-treat lubricating oils. It has also been found to have the remarkable property of precipitating out more and more of the heavy ends of lubricating stocks as the temperature is raised above about 120° F. It thus facilitates cutting off the heavy "tail" of a lubricating cut without necessitating the expense of distillation.

In comparing the single-solvent versus the double-solvent processes it appears that, while either type of process may be used to advantage on any kind of oil, in general the single solvents are better adapted to distillate oils, while the double solvent processes are particularly adapted to residual oils. In the latter case the tendency of light hydrocarbons such as propane to precipitate asphalt results in obtaining much better colored oils from residual stocks than by most single solvent processes. Propane deasphalting, followed by single solvents, will however yield generally similar results. It now appears that neither type of process requires acid treating for finishing, but that both require dewaxing and clay filtration.

Because of the intensity of the competition for improved quality it is probable that solvent refining is being commercialized before complete and adequate laboratory data are available. However, the refiner who waits until he is certain that he has the best possible process or combination of processes for his particular oil will probably be left behind in the race.

Tables 1 and 2 give the available information regarding solvent extraction plants in operation and under construction. While the list of solvent dewaxing plants (Table 3) either installed or under construction is not so large, it is nevertheless significant, particularly in that the number under construction exceeds the number now in operation. In addition to the foregoing, the Standard Oil Co. (Indiana) has under construction a plant involving the use of propane deasphalting followed by acid treating in propane solution.

From the foregoing it is obvious that in a remarkably short time the refining industry is equipping itself with an entirely new tool. The utilization of this tool will have far-reaching effects.

Effects on Refining Costs

A. Mid-Continent Crudes. Solvent refining should find its largest immediate use in the Mid-Continent Field. While commercial operating data on solvent refining are not very extensive, it definitely appears that a Mid-Continent refiner will be able to produce motor oils having laboratory inspections equivalent to Pennsylvania oils at a cost equal to or lower than his present cost. One of the factors which makes this possible is the fact that yield is of secondary importance. In general, more crude is run than is processed to lubs and therefore lub oil yield from the solvent processes is important only in so far as it affects plant cost and operating cost. Raw material is essentially worth only fuel oil or cracking stock prices.

Methods Used

In refining Mid-Continent crude one of two general methods is now ordinarily used, i. e., the long residuum method or the bright stock and neutral method. In the latter case the bright stock may be produced either as a vacuum distillate or as a residuum. While solvent refining costs will compare favorably with either of these two methods, for the sake of simplicity the comparison will be limited to one using a long residuum as the raw feed.

Present practice is to reduce the crude to 440° F. flash bottoms containing all the paraffin distillate. This product is acid treated, neutralized and filtered or hot contacted, diluted with naphtha and dewaxed, the diluent naphtha and then the neutrals distilled off, and the bottoms frequently given a finishing clay treat. The order of these operations may vary in different refineries but the essential operations are the same.

In a solvent refining process starting with a similar residuum the operations would include solvent extraction, acid treating if necessary, neutralization, clay filtration, solvent dewaxing, and probably a finishing clay treat. Neutrals would be obtained by rerunning the long residuum.

The variations in the actual details of present manufacturing methods are almost as great as the number of refineries producing lubricating oil. For this reason any estimate of present refining costs can be given only in very broad terms. Solvent refining costs are dependent upon the solvent used and the degree of improvement attained. Because of the number of solvent processes available and the various degrees of improvement possible, solvent refining costs also can be given only generally. While more detailed figures are available in the articles which discuss the individual processes, for the purposes of this paper we have taken approximately average figures for all the commercial solvent extraction and solvent dewaxing plants on which such data have been obtainable. It is obvious that the best solvent process for a given oil will generally give lower costs than the average figures set forth in Table 4.

While the figures in this table are approximate and do not include fixed charges, they do reflect as accurately as possible the present operating costs of the conventional methods of producing lubricating oil from Mid-Continent crude compared with those possible with solvent refining.

While undoubtedly objections may be made to the individual items of expense it is believed that the figures are correct in their relation to each other and justify the important conclusion that, based upon operating costs alone, a Mid-Continent refiner is economically justified in turning to solvent refining. This is particularly true in the many cases where acid sludge is a liability rather than an asset as above assumed.

If allowance could be made in the value of the finished products giving credit to the solvent treated oil for its higher V.I., lower carbon residue, and greater resistance to sludging and oxidation, the comparison would be overwhelmingly in favor of the solvent extracted oils. It is the belief of the authors that within a short time competition will force all Mid-Continent refiners into solvent refining and it is reassuring to note that such a step will in general result in lower operating costs.

Savings in Costs

In this connection it should be pointed out that at the present time solvent dewaxing apparently offers the principal savings in unit costs. If, however, solvent extraction minus solvent dewaxing be compared to acid treating minus centrifuge dewaxing and an allowance be made for degradation losses, the above mentioned manufacturing costs of a solvent-extracted oil (before dewaxing) would be 3.64 cents per gallon while that of an acid treated oil is 3.53 cents per gallon. The difference between these figures is within the accuracy of the comparison.

In the foregoing comparison an effort has been made to give the benefit of every doubt to the present processes involving acid treating. The yield for solvent extraction has been assumed lower than that reported by several authors at the November, 1933, meeting of the A. P.I.; acid-treating has been included in the finishing costs of solvent-extracted oils despite the fact that a large number of data are available to indicate that in at least several processes such a procedure will not be necessary; clay costs were computed on the basis of a lower N.P.A. color for the solvent extracted product; and finally, the differential cost between solvent dewaxing and centrifuge dewaxing has been taken at a lower figure than reported by one refiner who is using both processes.

It is not to be inferred that all refiners will find it profitable to both solvent extract and solvent dewax their lub oils. There are a few special Mid-Continent crudes, the natural V.I. of which is sufficiently high to produce oils of approximately Pennsylvania quality if the naturally occurring asphalt is removed. It is possible with crudes of this character that propane deasphalting only, followed by solvent dewaxing, will result in a satisfactory product at a lesser operating cost than those indicated. Also, there will doubtless continue for some time to be a market for cheap motor oils of moderate V.I.

Furthermore, since there is some question as to whether a high V.I. adds materially to the value of an industrial lubricant where relatively constant temperatures are usually encountered, some Mid-Continent refiners will prefer to produce industrial lubricants having a lower V.I. than those required for motor oils. The heavier oils of this character can be produced with a reduction in present operating cost by propane deasphalting and acid treating in the presence of propane or by countercurrent deasphalting followed by clay. For example, a bright stock of 150 viscosity at 210° F. can be made from pipe line Mid-Continent crude by conventional refining methods, using approximately 60 pounds of 93 per cent acid per barrel of raw stock processed. The loss upon acid treating is approximately 35 per cent. If the same stock be deasphalted with propane and sulphuric acid applied while the oil is still in propane solution, the acid requirement can be reduced to 20 pounds per barrel of charge. The clay cost to finish such an oil to a 5 N.P.A. color is

roughly one-half that required to finish the ordinary acid treated stock to a 6 N.P.A. color. By countercurrent deasphalting of such a stock under proper temperature conditions acid treating can apparently be eliminated entirely, though clay costs are then somewhat higher. While no detailed figures have been made to cover this particular comparison it is obvious that a propane deasphalting plant will be more than justified, even to produce an oil of only moderate V.I.

In conclusion, it can be stated that the demand for high V.I. motor oils will almost certainly increase in the next few years, and the Mid-Continent refiner will be forced to solvent refine his oils to meet this demand. The result of meeting this demand will be a lesser operating cost, but since no average figure for plant cost to accomplish this result is available at this time, it cannot be stated that the saving in operaing cost alone will justify the capital expenditure. However, the ability to produce oils having all of the most desirable test characteristics previously claimed for Gulf Coast and Pennsylvania oils, and this at a reduced operating cost, will certainly lead to the general adoption of such processes by most Mid-Continent refiners of lubricating oil.

B. Pennsylvania Crudes. The position of the Pennsylvania refiner is quite different from that of the Mid-Continent refiner because in his case yield is an important item and solvent refining will result in decreased yield as well as an additional operation. In the past the premium paid for Pennsylvania motor oil has been justified on the basis of its higher V.I. and generally greater resistance to sludging and oxidation. With the production of solvent refined Mid-Continent oils having equal or better characteristics in these respects than the present grade of Pennsylvania oils he will shortly be faced with one of the two alternatives:

1. To compete directly with solvent refined oils on a price basis, or
2. To improve the quality of his product and attempt to maintain the same differential as at present.

The first of these would require elimination of the present premium and be unsatisfactory unless operating costs could be reduced. The second alternative of increasing the quality would appear to offer the most promise as a satisfactory solution of his problem. Neither of these alternatives looks particularly attractive to the refiner from a cost standpoint at present crude prices, but since the value of Pennsylvania crude is almost solely dependent upon its value for the production of lubricants, it seems inevitable that the differentials between Pennsylvania and Mid-Continent crudes will be reduced to an extent sufficient for the Pennsylvania refiner to compete on whichever basis is found necessary.

Solvent refining of Pennsylvania crude makes it possible to produce oils of about 115 V.I. with a loss of 15 to 25 per cent of the present yield. The present differential of 30 to 40 V.I. between ordinary Pennsylvania and Mid-Continent oils will therefore be reduced to about 15 V.I. on the new basis, and the apparent difference to the consumer will probably be less than these figures indicate. However, in aviation engine oils the extra V.I. and higher stability might very possibly be worth the higher cost. Also the low V.I. extract produced as a by-product could probably be marketed as industrial lubricants. It is hoped that they will not appear on the market as "100 per cent Pennsylvania" oils.

Reduction of Costs

The reduction of operating costs by solvent refining of Pennsylvania oils, while not as important as in the Mid-Continent Field, still offers some possibilities. Removal of a large portion of the color bodies by propane deasphalting or by light solvent treating might so reduce the final decolorizing costs that the total operating cost would be no greater than at present, and the carbon residue would be reduced. Although the loss of yield is a serious factor with the present differentials, the application of solvent refining methods to reduction of decolorizing cost appears to be a possibility for the Pennsylvania refiner. Another possible economy for Pennsylvania refiners is in the saving of clay by light acid treating and neutralizing in the presence of propane. For example 12 pounds per barrel of 93 per cent acid on Bradford residuum reduces the clay required for finishing by about 50 per cent, with only a very slight reduction in yield. The use of propane as a solvent and internal coolant appears to make acid treating of Pennsylvania resids commercially feasible for the first time.

Asphalt Base Crudes

Motor oils from asphalt base crudes are generally made from a long distillate produced by running the crude to an asphalt bottoms. This long distillate is usually rerun over caustic soda, cutting the various lubricating fractions desired. The motor oil fractions are then treated with from 15 to 20 pounds of acid per barrel and contacted or percolated to finish oil. The acid loss averages from 7 to 12 per cent and the stock requires no dewaxing.

If an asphalt base distillate having a V.I. of 30 be extracted to a V.I. of 65 to 70 the yield of raffinate will be approximately 60 per cent. If an effort be made to improve the V.I. to 100 the yield will drop to something around 30 per cent or less. Since oils of even 30 V.I. are usually associated with small quantities of wax, it appears probable that such drastic solvent refining will concentrate the wax, enough to make dewaxing necessary.

The additional cost of solvent refining and dewaxing combined with the low yield obtainable make it appear that the production of oils of really high V.I. from asphalt base stocks will not be economically justified. On the other hand, it is probable that refiners of asphalt base crude will resort to solvent refining to improve the sludging and oxidation characteristics of their oils without seriously increasing their cost. Since industrial lubricants do not in general require a high V.I., it is probable that most of the present lub production from asphalt base crudes will be diverted to such industrial uses as do not require particularly high V.I., or low volatility.

Miscellaneous Economic Effects

1. Probable Effect on Crude Price.—From the foregoing it is evident that solvent refining will have a tendency to change the relative prices of crudes used largely for lubricating stocks. In the Mid-Continent Field there are several crudes which have in the past commanded premiums as lub crudes. Among such crudes are Garber, Burbank, Tonkawa, Ranger, deep sand Reagan, and others. It has already been pointed out that yields from Mid-Continent crude are important only in so far as yield affects plant cost or operating cost. Unless the yield from these selected crudes is sufficiently high to justify a premium due solely to lower operating costs it is probable that the premium of these crudes will disappear.

Pennsylvania crude commands a large premium in comparison with Mid-Continent because of the high yield of high V.I. lub oil which can be obtained with present refining methods. Solvent refining by producing oils of equal properties from less expensive crudes will undoubtedly have a tendency to reduce the premium on Pennsylvania crudes. This is particularly true in view of the fact that the straightrun gasoline produced from Pennsylvania crude has a very low octane number, and that the price structure of Pennsylvania crude rests almost entirely on the premium being paid for Pennsylvania lubricants.

2. Influence on S.A.E. Number and Consumption.—For some time there has been a movement on the part of motor car manufacturers to recommend oils of lower S.A.E. number. The moderately increased consumption which follows the use of such lighter oils has probably deterred the whole-hearted adoption of such a recommendation. However, increasing the V.I. of a motor oil has a tendency to decrease its consumption, especially in the lighter grades. In a series of careful tests to which the writers have had access it was found that at an engine speed of 60 m.p.h. an S.A.E. 10 W oil of 50 V.I. showed a consumption of 1 quart per 63 miles, whereas a 10 W oil of 100 V.I. gave a consumption of 1 quart per 148 miles. Oils of intermediate V.I.'s gave intermediate consumption. Also, an S.A.E. 20 W oil of 100 V.I. showed only 11 per cent higher consumption than an S.A.E. 40 oil of zero V.I.

It appears probable that the demand for lighter oils will stimulate the trend toward the use of oils of higher V.I. and vice versa, and that the net effect on oil consumption will probably not be large, though gasoline consumption will undoubtedly be slightly reduced. The use of lighter grades of oil of course reinforces the trend toward distillate oils, and this in turn almost necessitates the use of solvent dewaxing processes.

3. Effect on Cracking.—The large production of solvent extracts may possibly call for the design of a cracking plant somewhat different from present-day cracking plants to more effectively utilize this highly naphthenic product and and make a high octane gasoline.

Trend to Contract Drilling in California Due to Changed Operating Conditions

By L. P. STOCKMAN

LOS ANGELES, Calif., July 14.—California is slowly but surely adopting development policies that conform in all respects with practices that have been in effect in the Mid-Continent and Gulf Coast for a number of years and it seems that it will be only a matter of time until most operators recognize the inherent advantages accruing from contract drilling. Until recently, California operators have done most of their own drilling and normal development work but there is now a very definite trend toward the contracting of future drilling. Employment problems, resulting from the depression, are undoubtedly responsible to a large extent for the new policy adopted in part by several California operators as efforts to retain the maximum number of employes has proven quite a burden during the past two years. This has likewise worked to the disadvantage of the workman as in many cases employment has been reduced to 3½ or 4 days work per week. Many drillers have left California within the past two years, some going to Texas and the remainder to other producing areas where drilling operations were not so severely reduced.

The Standard Oil Co. and the Kettleman North Dome Association are the outstanding proponents of contract drilling and both have found this method of operation highly successful and beneficial as a survey shows conclusively that under this plan, wells are completed faster and at less cost. Kenda's operations are limited exclusively to the Kettleman North Dome but Standard has let drilling contracts during the past few months in the Kettleman North Dome, Mountain View and Montebello fields. Ohio Oil Co. and Western Gulf Co., instead of building up a large development organization, have relied to a large extent on contract drilling and two wildcats of these operators now under way are being drilled on a contract basis. The Texas Co. is reported to be considering the advisability of adopting the policy of letting out much of its future drilling and from present indications this practice will become of more importance within a short time.

Developments during the past few years clearly indicate the advantages accruing to contract drilling both from an operating flexibility and economic standpoint. Under this plan, efficiency is increased and the operating company relieved of the necessity of maintaining an excessively large pay roll. The drilling contractor is in a position to demand efficient work and because of this can drill faster and at less cost than is the case in many instances where company employed crews are not on their toes. Drilling efficiency is further increased because of the fact that the drilling contractor will use the most modern equipment in order to make footage. It is to his advantage to make hole as quickly as possible in order to complete the job and this incentive stimulates rapid work. Contract drilling is especially suitable to drilling operations in proven fields where definte markers are present and the approximate depth of zones logged. Kettleman Hills is particularly susceptible to this type of work due to the depth of the productive zone as this interval permits the contractor plenty of opportunity to make fast footage. Turnkey jobs, except in rare instances, form no part of the new policy.

Contract drilling offers certain inherent advantages from a personnel standpoint as the drilling contractor is in a position to command efficient work and at the same time pay a higher rate of pay wtih a bonus added for exceptional work. Because of this, competent drillers and helpers are in demand and the incompetent crews eliminated. There is not much chance to lie down on the job as each day lost, either through injury or avoidable delay, adds to the cost of making hole. From the producer's standpoint, the matter is equally as important as he gets production quicker and it eliminates the per diem of drilling crews during fishing jobs or other mechanical delays which in many cases run the drilling cost substantially above normal. Contract drilling is particularly advantageous from a personnel standpoint because the producer's contact with the drilling crew ceases upon completion of drilling operations.

One of the most important angles to the situation is the fact that many operators, doing their own drilling and development work, are using old equipment. A pile of 79 steam boilers at a concentration point of one company tends to indicate that there is a lot of old equipment lying around that should be replaced with a more modern type.

There are not very many drilling contractors in California due primarily to the practice in vogue up until recently of employing drilling crews directly. Increase in the practice of awarding drilling contracts, however, will result in the formation of new companies and the probable entrance of Mid-Continent contractors in California. Developments indicate that reputable drilling contractors might do well to watch the progress of the present movement during the next several months. Due to the extreme depth to which many California wells have to be drilled, it is quite obvious that drilling contractors must be financially able to undertake deep drilling and prosecute work efficiently because a failure in one of these deep holes is ruinous.

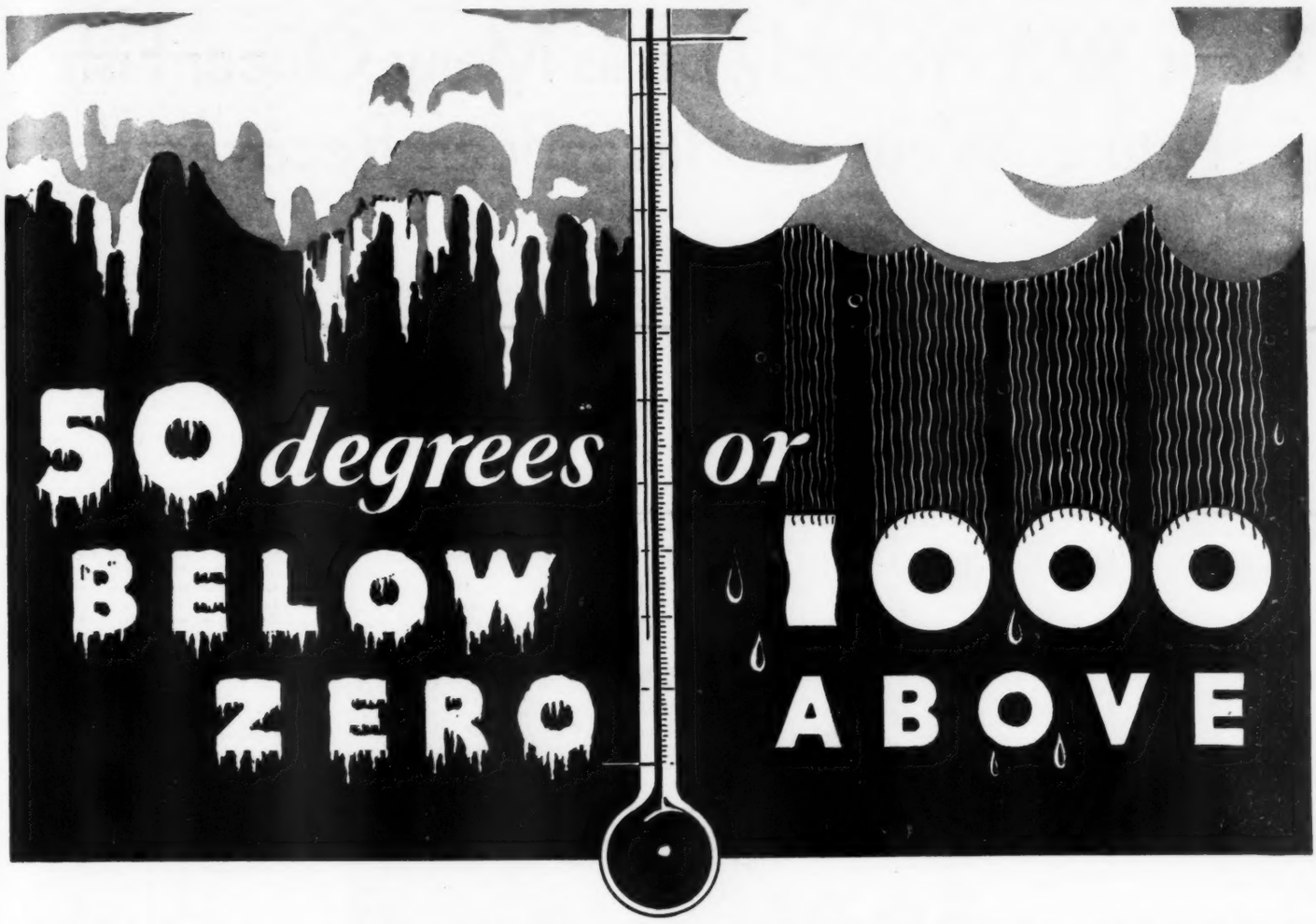
MAGNOLIA RAISES WAGES

DALLAS, Tex., July 16.—Magnolia Petroleum Co. has increased the wages of field employes in all of its districts, effective July 1, it was announced today after the midmonth checks were sent out. The increases amount to about $600,000 per year, D. A. Little, president, said.

Mr. Little said the wage scale already is above that recommended under the code, and added: "We are making the voluntary increase of $600,000 in the payroll to share our returns with employes and to aid in restoring buying power."

MONTANA LINE PLANNED

The Billings (Montana) Gas Co. includes in a $275,000 improvement program the laying of a new pipe line from the Yellowstone River crossing south of Laurel, Mont., to Billings. The new line will be 14 miles in length and of 12¾-inch welded pipe. Other improvements include main renewals and extensions.



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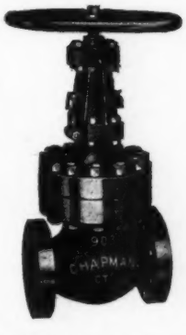

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There Will Probably Be as Many Queer Fish in Future Wells as Have Been Recovered

By L. G. E. BIGNELL
Petroleum Engineering Editor

"Fishing" usually means trying to catch fish in a stream, pond, lake, ocean or some body of water, but there is an entirely different meaning applied to the term as used in the oil fields. In drilling with either cable tools or rotary outfits parts of the tools or other foreign material may be lost in the hole and the attempt to remove it the operator calls a "fishing job." This is a very apt term for regardless of the kind of a fish the operation is much the same whether carried on with a line and bait or with some peculiar shaped tool or device that is lowered into the drilled hole to remove the lost part.

Ever since men have drilled holes in the earth's crust they have had misfortunes and lost material in the hole. And many queer kind of fishing tools have been devised to recover the lost parts. However, it is not the purpose of this article to attempt to cover these various types of tools but rather to deal with the modern cleanout operations such as are followed in deep fields in various parts of this country. When wells are drilled to depths of more than 1 mile any operation that has to be carried on at the bottom of the hole takes on a great significance for there is a considerable amount of money at stake.

Deep holes of this sort cost many thousands of dollars to drill and it is possible to ruin them completely if the fishing operation is not properly carried out. Also it is now known that aside from the loss of foreign material in the hole much damage can be done by the settling of sand, shale and other portions of the formation to the bottom of the hole. Such settlings will tend to seal off the face of the hole drilled into the pay section of the formation. If not removed the well wil depreciate to a very small producer relatively early in its life. Under proration such deficiency in production is hard to detect because the wells are allowed to flow only part time and they have great enough capacity to produce their allowable through that portion of the formation remaining open in the hole.

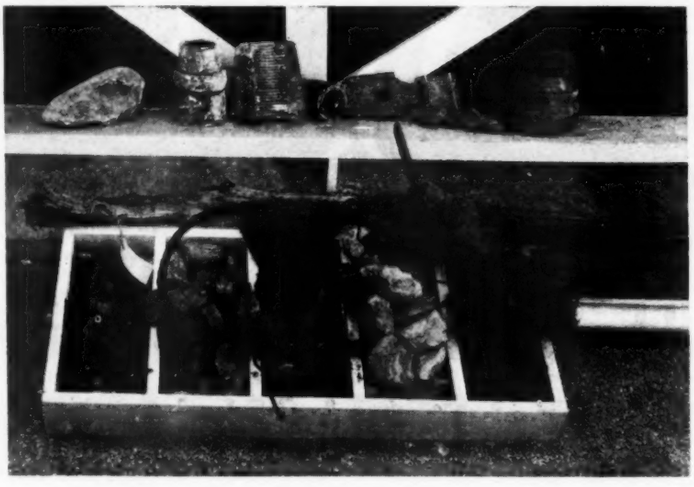
Settlings

It has been demonstrated that fluid flowing in an upward vertical column has a limited carrying capacity, just the same as streams flowing on the surface drop their load of silt and sand as the current velocity decreases. Therefore with wells flowing large proportions of sand, as some of the wells in the Oklahoma City Field did when first drilled in, it has been found that this load of sand was dropped when the wells were shut in after taking their allowables or for other reasons.

It is reported that a well that had a daily capacity of 70,000 bbls. of oil and 150,000,000 feet of gas through 7-inch casing produced 20 per cent by volume of sand. It has been estimated that this stream was flowing at the rate of 450 miles per hour at the top of the casing. This accounted for the rapid cutting action of this sand and the destruction of fittings at the well head within a few hours. At one well over 2,500 tons of sand was delivered to a pit alongside the derrick as the well was cleaning itself after being drilled in. These figures give an idea of some of the conditions existing at the Wilcox sand wells in the Oklahoma City Pool and they have been equally bad in deep wells in other pools.

Several years ago when the Huntington Beach Pool in California was much younger there was a floating sand condition set up in the casing that caused much trouble in producing the oil. The loose sand was carried upward by the oil and gas but as the gas expanded and the velocity of the oil stream slowed down this load of sand could not be carried out of the casing and accumulated in it.

As the sand ceased to move upward it was not long until a large enough quantity gathered in the pipe and completely shut off the flow of oil or gas. This was referred to as a "floating bridge" by the drillers because if they attempted to remove it by the use of cable tools, or drill it out with a rotary string or even



A few specimens of material removed from wells by the Cavins suction type bailer

bail it out with an ordinary type bailer the results were usually unsatisfactory.

To drill on top of a bridge of sand under this condition was dangerous because the sand pack would be driven downward and the gas beneath compressed. This would not remove the sand, but rather make it more difficult to open the casing. If the driller did succeed in breaking through the bridge the compressed gas below it would be suddenly released and rushing upward would drive the tools up the hole and tangle the wire line around them so that a bad fishing job would follow.

New Method Developed

Omar Cavins, a geologist and petroleum engineer, with the Standard Oil Co. of California, conceived the idea of sucking loose material in a hole into the lower compartment of a bailer by causing fluid to rush upward into an upper compartment that was sealed under approximately atmospheric pressure when the bailer was on the derrick floor. By creating this sudden rush of fluid from one compartment to the other the fluid and debris outside of the bailer would tend to replace the fluid that had left the lower compartment and once in the lower compartment a valve would close to prevent this material from escaping until the top of the hole was reached and the bailer dumped.

The story is told that when Mr. Cavins first conceived the idea of this method of bailing he was living in Mexico and not wanting his Mexican neighbors to become concerned with his experiments, he had a 75-foot hole drilled in one corner of the room that served as a kitchen. This action caused the Mexican servant to consider Mr. Cavins rather "queer," but when he ran the bailer and in releasing it of the mud and sand it had picked up at the bottom of the hole squirting its contents all over the kitchen the servant was very certain that Mr. Cavins was "loco ca." But he had satisfied himself that his idea was practicable although he has simplified the mechanism since.

The idea of using the suction type bailer on the floating bridges in the Huntington Beach Field was to lift the load off of the gas beneath gradually and in this way give the compressed gas an opportunity to lift the sand and assist in clearing the hole. As the gas expanded beneath the bridge the pressure dropped and it was less dangerous. It was the very reverse of the operations that tended to force the bridge down in the hole and compress the gas beneath. The bailer was used with pronounced success for this kind of work in the California fields and has grown in popularity and its uses expanded until now it is used for many cleanout and fishing jobs.

Queer Fish

The things that get into a drilled hole pass the imagination, and it has often been stated that "everything on the lease except the boiler was in the hole." While somewhat exaggerated this statement does give a rough idea, and to examine some of the objects that the Cavins suction bailer has brought to the surface out of holes rather confirms the idea that nearly anything small enuogh to get into the hole may at some time fall in and cause trouble.

Parts of drilling bits are broken off under improper usage and cause trouble. They have been picked up with the suction bailer and as they weigh several pounds and are almost as large as the hole through which they enter the "basket" that is used for such a fishing job they may be brought to the surface.

Parts of time bomb cases composed of both cast iron plugs and bails and wadded tin shells are frequently removed from a hole by this method. In one instance a portion of a sapling 4 feet long and 3 inches in diameter was caught in the lower valve in the bailer and brought out of the hole. The stick had been used to form a bridge over a shot but had not been destroyed by the shot. To remove it from the bailer it was necessary to firmly anchor the exposed lower end to the derrick floor beams and then pull the bailer up into the derrick until the stick was pulled out.

Sand and Mud

The material removed from wells in all parts of this country by this method indicates quite clearly that cleaning out is good for any well. Soft sands, shales and other formations will break down and accumulate in the hole. No well is entirely free of such accumulations and while it may flow its prorated quantity of oil it does not necessarily follow that it is flowing at the full capacity of the sand.

Wells in the Oklahoma City Wilcox sand zone have been found with sand filling the casing 2 000 feet from the bottom of the hole. These wells are about 6,500 feet total depth and the top of the packed sand in this instance was about 4,500 feet below the surface. Most of the oil had flowed out and as the well was shut in the velocity of the upcurrent of the fluid decreased and the sand gradually dropped toward the bottom of the hole. This action was so gradual that after the well was shut in the settling sand caught oil and gas above the top of the bridge and when the well was again opened much of this oil and gas flowed out upon release of pressure but the sand did not follow so it was necessary to load the hole with water before bailing started.

As the sand was removed the gas gradually broke through and stirred up the sand until the well flowed out the remainder of the settlings with the oil.

As the hole was filled with water to the top of the casing it was possible to note the effect of releasing the valve between the upper and lower chambers in the bailer when at the bottom of the hole. When this was done the fluid rushed upward through the lower chamber into the upper one that had been sealed at atmospheric pressure when the bailer was lowered into the fluid. It was noted that the water level dropped about 15 feet below the surface then suddenly surged upward again and some water actually overflowed the casing. This movement is equal to the displacement of a greater volume of water than the bailer can hold. It is possible that air and gas in the fluid column compressed when the fluid at the bottom of the hole suddenly rushed into the bailer and then expanded again when equilibrium was established. The surging is a common occurrence in bailing and no other explanation seems to fit the condition.

In some wells rotary mud has been found and removed long after the well has been completed. This mud was semi-hard and near the top may even be dry and caked. This is hard material to remove for it does not drill easily and does not soak up water rapidly.

It has been observed that after running the bailer several times the top crust will be broken and then bailing is easier for below this top layer is found alternating strata of softer mud, sand, shale and other debris that has settled into the hole. The sand and shale probably sluffed into the walls of the hole as

(Continued on Page 33)

Debit or Credit

Gasoline can be a liquid asset to a refiner—or it can be a liability It depends on the gasoline

Dubbscracked gasoline is a current asset because you can always sell it—you can always get the price for it

Straight-run gasoline is a current liability if you sell it now because you *can't* get the price for it—probably not even your cost

It is a deferred liability if you store it Evaporation takes its toll—carrying charges mount

It must be sold some time and what is left won't be worth any more then

Dubbscracking is the real way to make gasoline

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
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Member, Audit Bureau of Circulations

Natural Gasoline Regulation

The Texas Panhandle has been asking the Congressional investigating sub-committee to visit that area or look into the natural gas situation there as an essential part of any plan for stabilizing the oil industry.

The Panhandle Conservation Association told the committee that an appalling waste of gas is being permitted, practically without restriction or regulation; that waste into the air has increased rapidly until it is now approximately a billion feet daily or equivalent to the daily domestic consumption of natural gas in the entire United States.

Natural gasoline production, the association continued, "is not regulated in any way and is running rampant and making less effective oil and refining regulations."

This point directly concerns the oil industry. Curtailment of overproduction of crude oil and allocation of refinery gasoline production need to be supplemented by some form of allocation of natural gasoline that will curb overproduction in the Panhandle.

If the demand for this natural gasoline by refiners is not sufficient there is the danger that natural gasoline plants will weather their gasoline surplus regardless of waste and sell the stabilized product in cut rate competition with other motor fuel.

The latest Bureau of Mines report shows that 20,000,000 gallons of natural gasoline were produced in the Panhandle in May, making a total production of 97,500,000 gallons in the first five months of the year.

This is a 50 per cent increase over the same period last year and is half as large as the total production of California and almost as much as Oklahoma.

Natural gasoline production in other states is controlled by the curtailment of crude production but in the Panhandle the production from the gas field is of course unaffected by crude regulation.

"We have the anomaly", says the Conservation Association, "of strict proration in the Panhandle to 56,000 barrels of oil daily at the same time there is being needlessly and recklessly wasted into the air a billion feet of gas or the equivalent in heating value of over 200,000 barrels of oil."

This contradiction in conservation is duplicated in the regulations which limit natural gasoline production in other States through regulation of crude production while the Panhandle can produce all it pleases and undersell the regulated States.

The reckless waste of the enormous volume of gas being dissipated in the Panhandle is bad enough but that loss is being increased by the effects of the overproduction of natural gasoline on the markets of the oil industry.

New Peak in Domestic Demand

For years the oil industry enjoyed the distinction of having a domestic demand for its principal product that was assured of a continuous increase.

The all time peak for domestic gasoline consumption was reached in 1931, although we were then in the second year of the depression. Even when the demand declined the drop was comparatively small compared to the experience of other industries, but any decline at all was so new to the oil industry that it was startling to those accustomed to ever increasing volume.

The tide began to turn last year and it is now good news to learn that in the first five months of 1934 the domestic demand for gasoline exceeded by 2 per cent the peak consumption, in 1931.

Domestic demand in May was over 11 per cent above that of May a year ago and 9.6 per cent above the five months period in 1933.

Compared with that period the total demand, domestic and export, was over 8 per cent greater in the first five months of this year.

Exports which were nearly 27,500,000 barrels in the first five months of 1930 were 20,500,000 barrels in the same period of 1931 and 11,135,000 barrels this year. They are now only 40 per cent of the peak, but total demand, domestic and export, is 91 per cent of the 1930 peak.

At the same time, as an analysis elsewhere in this issue shows, there has been a marked increase in the demand for kerosene, gas oil, fuel oil and lubricating oils, reflecting the improvement in general business.

Whatever may be its internal troubles the oil industry has no reason to complain about sustained demand for its products. Which makes it the more foolish to wreck this good fortune by wrangling.

Must Play Fair

The 930,000 barrels reduction in the gasoline production allowables for August is not due, of course, to any expectation that August consumption will be less than July since both months run approximately the same, but is designed to allow for withdrawals.

A reduction of almost a million barrels of gasoline production in August must of course mean a corresponding reduction in crude demand, unless indeed hot oil overproduction in East Texas can be stopped which would about account for the difference.

If the surplus gasoline buying campaign in East Texas accomplishes its purpose and the sellers cut out overproduction the surplus bought may take the place of the cut price gasoline that has been holding down the market.

It is yet too early to judge results. So far as percentage of signatures goes the plan has been more successful than was at first expected. The temptation to try to profit from the situation will be hard for habitual chiselers to resist. Federal revenue activities may help some.

Some disappointment is heard that gasoline prices have not gone up more but others think it will be enough if the market can be maintained instead of being persistently undersold with a threat of imminent collapse.

It is reasonably certain that further improvement must await the successful outcome of the buying plan and those who try to beat it by speculation will get their fingers burned to no avail.

The only hope for success is through fair dealing all around, since it is inconceivable that the buying companies will submit to being imposed upon.

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NEWS FROM FOREIGN LANDS

U. S. S. R.

Daily average crude oil production in the U.S.S.R. in May, according to preliminary figures, was slightly less than in April but substantially greater than the production in May of last year. The May average was 461,600 bbls. daily, which compares with an average of 470,900 bbls. in April and 417,400 bbls. in May of last year.

The May figures show little change in the trend of operations which have been apparent so far this year. In the crude oil producing end, while output is greater than last year, it is behind the plan of the government announced at the start of the year. In relation to the plan the Maineft was the only trust in May which fulfilled its crude production quota. This operating unit was also ahead of the plan for the first four months of the year. The Azneft trust, which furnishes 80 per cent of the total production, in May was running 87.6 per cent of the plan, which is approximately the average for the first four months of the year. Its production, however, so far this year has been 40 per cent greater than the same period in 1933. The Groznefl operations have proved disappointing, running behind 1933 and also less than 70 per cent of the plan.

Drilling operations in the U.S.S.R. for the first five months of 1934 were approximately 76 per cent greater than the same period in 1933. However, in this phase of operations activity has been below the government's plan. The Azneft drilling operations are 60 per cent ahead of last year and have been only slightly below the plan.

The bulk of the drilling has been in the proven fields where new wells have been drilled and old wells deepened and reconditioned. In this phase of operations, drilling the first five months totaled 463,156 meters, which compares with 242,205 meters for the same period in 1933.

Drilling operations in extension areas of old producing sections and wildcatting has been running well behind the plan. Recent reports from Russia indicate that these phases of operations will be expanded over the latter half of the year.

Refinery operations have been running closer to the schedules announced at the start of the year than have the drilling and producing operations. However, the increase over 1933 is less pronounced. Crude runs to stills in May, which averaged 422,000 bbls. daily, were practically the same as in April and were 94 per cent of the plan. For the first four months of the year crude runs to stills were 16 per cent greater than the same period in 1933.

From these crude runs to stills in May, 249,350 bbls. of gasoline were obtained which was practically 100 per cent of the plan. Kerosene production, which is more important than gasoline in Russia, ran 94 per cent of the plan. These May figures indicate a gradual improvement in refinery operations starting early in the year.

GERMANY

German imports of crude oils and refinery products during the first five months of the current year registered an increase of 23 per cent over the corresponding period of 1933, according to a report from Consul Lester L. Schnare, Hamburg, made public by the Commerce Department. Receipts in the 1934 period total 982,000 metric tons as against 796,000 metric tons in the first five months of 1933. All varieties of oils showed increases, advances being especially marked in the case of gasoline, gas oil and fuel oil.

German imports from the United States during the 1934 period declined about 6 per cent as a result of smaller imports of American gasoline, kerosene and fuel oil. Imports of gas oil were only slightly smaller than for the previous year while imports of lubricating oil showed substantial improvement.

The principal beneficiary of the increase in mineral oil imports into Germany during the current year was Russia, due to larger imports of gasoline, gas oil and lubricating oil. Imports of gasoline from Peru also advanced materially.

The reduction of importers' allotments of foreign exchange with which to pay for arriving shipments, the report points out, has brought about a very serious situation for mineral oil importers who are faced with the necessity of reducing their imports unless they are willing to accumulate surpluses of reichmarks in Germany for the release of which there is no present prospects.

Production of crude oil in Prussia, where the only fields of any consequence in Germany are located, amounted to 108,165 metric tons in the January-May period of 1934, compared with 89,000 tons and 86,414 tons, respectively, in the corresponding period of the two preceding years.

VENEZUELA

Venezuela, with a total production of 11,540,000 bbls. in May, continued to increase its daily output of crude oil. The May average of 372,000 bbls. daily compares with 367,000 bbls. in April, 350,000 bbls. in March and 348,000 bbls. in February. Preliminary figures for the first five months show a production of 11,540,000 bbls., a gain of approximately 20 per cent over the same period in 1933. A large part of the increase is due to the enlarged production of the eastern Venezuela fields. Approximately 20 wells are being completed monthly. Wildcat operations are largely confined to eastern Venezuela where several important tests are drilling.

FRANCE

French imports of crude oil during the month of May totaled 343,000 tons, according to official reports. This average of 77,000 bbls. daily established a new record.

Government reports covering the first five months of 1934 and 1933 show the following imports of crude oil and refinery products into France (data in tons):

	First five months	
	1934	1933
Crude oil	1,562,000	788,000
Gasoline	486,000	729,000
Kerosene	20,300	45,400
Lubricating oils	69,500	79,131
Gas oil	137,400	161,500
Fuel oil	134,400	260,000
Road oil	19,000	33,400

It will be noted that the crude oil imports have shown an increase of approximately 100 per cent the first five months of this year over the same period in 1933 with substantial decreases in the imports of all refinery products. This reflects the rapid expansion of refining facilities in France which now enables plants in that country to supply more than 60 per cent of the principal refinery products consumed in that country.

The available figures also indicate that the consumption of petroleum products in France is increasing. Imports of crude oil and refinery products the first five months of this year totaled 2,444,000 tons and 2,100,000 tons for the same period in 1933. For the periods under comparison, exports of petroleum products increased from 77,000 tons in 1933 to 223,000 tons in 1934. Making allowance for these differences in exports and the increased domestic consumption of petroleum products in France the first five months of this year was approximately 10 per cent.

WEST INDIES

Considerable shifting in the export movement of crude oil and refinery products from the Netherland West Indies is shown in official reports covering the first quarter of 1934 when compared with the same quarter in 1933. In the crude oil end exports to French refineries increased from 691,000 bbls. the first three months of 1933 to 1,157,000 bbls. for the first quarter of this year. Crude exports to United States and other countries showed relatively little change except that those to the United Kingdom totaled only 35,000 bbls. the first quarter of 1934 compared to 129,000 bbls. for the first three months of 1933.

In the refinery products, the West Indies exports to France decreased but in general showed a gain to Great Britain. Exports of gasoline increased from 4,166,000 bbls. the first quarter of 1933 to 6,247,000 bbls. the first quarter of this year; kerosene jumped from 305,000 bbls. to 722,000 bbls., lubricating oils from 149,000 to 192,000 bbls. and Diesel oil from 411,000 bbls. to 1,445,000 bbls. Gasoline exports to United Kingdom increased from 2,652,000 bbls. in 1933 to 4,405,000 bbls. in 1934. To the same countries kerosene exports increased from 114,000 bbls. in 1933 to 363,000 bbls. in 1934. Exports of fuel oil to United States decreased from 4,323,000 bbls. in 1933 to 2,750,000 bbls. in 1934.

ALGERIA

Plans have been completed in Algeria to sell olive oil as a lubricant for motor vehicles and other types of internal combustion engines. The Algerian Bridges and Roads Service has ordered the use of the new lubricant for its own motor vehicles. The oil is being offered in tins at a price which is equivalent to about 23 cents per quart.

The commercial exploitation of the olive oil as a lubricant follows research work carried on by Prof. A. Bastet of the Genie Rural of the Institut Agricole d'Algeria over a period of three years. Professor Bastet, according to a report of the American Vice Consul at Algiers, found that the viscosity of the new olive oil at a normal temperature is equal to the very best quality of mineral oil and it varies less rapidly at an even temperature; the formation of carbon on piston heads and valves and the wear and tear of motor parts are less when olive oil is employed; deposits in the crankcase are more abundant with olive oil; premature coagulation of olive oil when cooling does not exist and, although the oleoic degree of olive oil may rise to 6.5 after a motor has covered the equivalent of 7,000 miles without a change of oil, an examination of the motor employed showed no trace of acidity on the various metals. As a consequence, Professor Bastet recommends the use of olive oil for lubricating purposes on the condition that the oil contains no sulphur; that its acidity content is not more than 0.8 oleoic acid; that a change of new oil with a complete flushing be made every 1,200 miles for automobiles, trucks and buses and every 40 working hours for tractors and that the oil filter be cleaned every 300 miles for automobiles and daily for tractors.

RUMANIA

Despite unfavorable marketing conditions in recent months, exports of petroleum products from Rumania are running ahead of last year. Government reports covering the first four months of this year show that the exports have totaled 1,948,000 tons, which compares with 1,845,400 tons for the same period in 1933. France, Italy and Great Britain, in the order named, are the principal buyers of the Rumanian crude oil and refinery products.

The Gargoyle No. 2 well of the Itag, Internationale Tiefbohr-Aktiengelsellschaf, located in the Nienhagen field of Germany. This well has a production of 700 bbls. (100 tons) daily

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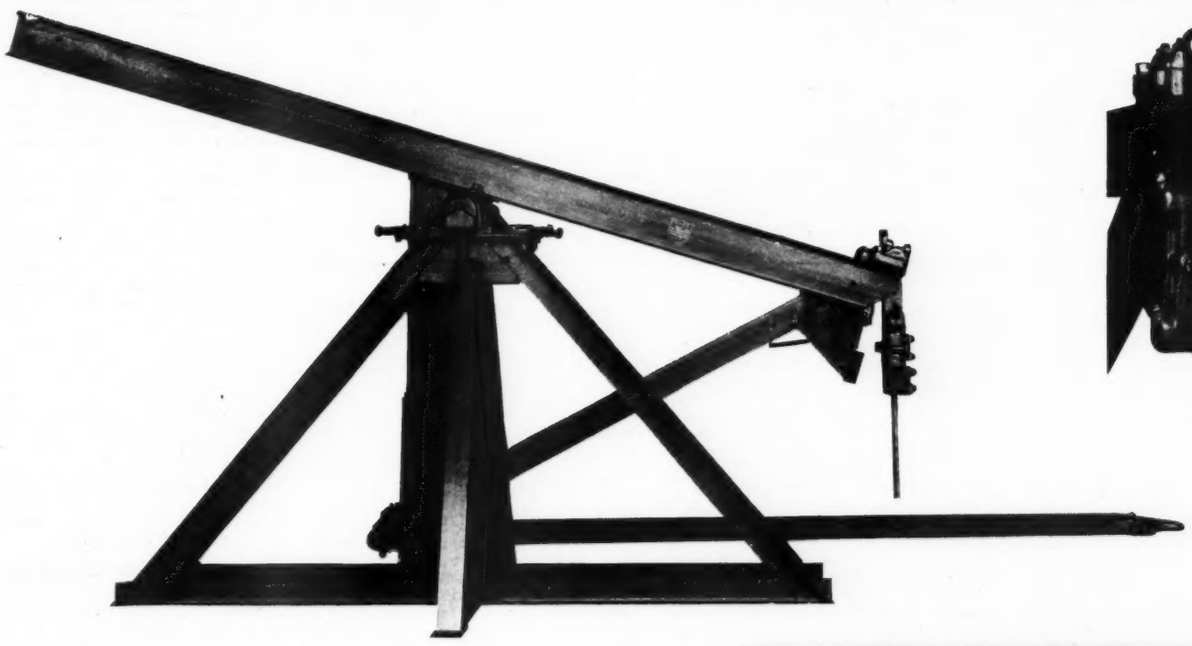
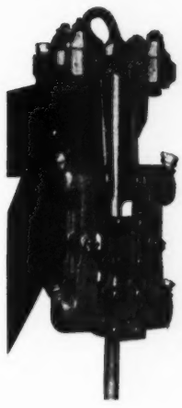
TYPES D-80, D-100 AND D-130-S





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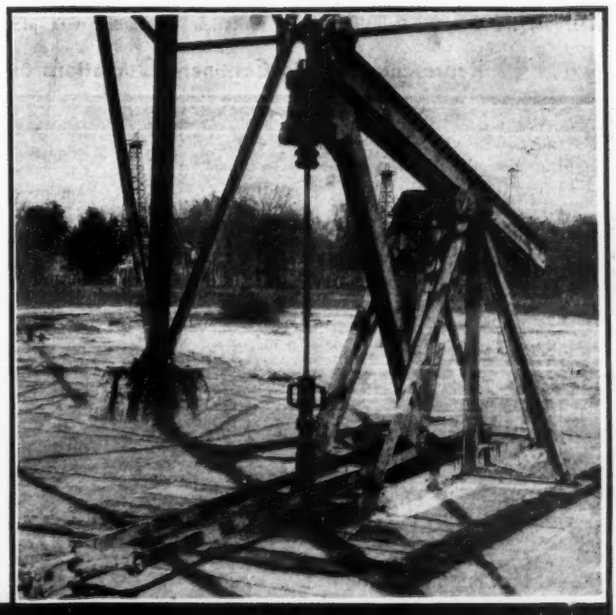


THE NATIONAL SUPPLY COMPANIES

Group 3 Market Outlook Brightens as Conditions in East Texas District Continue to Improve

By T. F. SMILEY

The brighter view taken by the trade in the Oklahoma (Group 3) area was even more pronounced this week as improved conditions in East Texas not only showed no signs of fading, but offered reasons for increased confidence. There was no disposition to regard the gasoline purchasing plan now in operation there as a cure-all or as even likely to accomplish all its objectives, and there was frank skepticism concerning certain phases of the plan as it is being worked out.

It was conceded on all sides, however, that excess stocks of East Texas gasoline, which long had been a continuous threat to the market, were now nonexistent. Major refining companies actually were buying every gallon offered under the contract sponsored by the petroleum administration, which stipulates that the independent refiner selling the motor fuel shall not produce or process any hot oil and shall restrict his production to the allocation assigned him by the Planning and Coordination Committee.

Refined Oil Market Barometer

A firmer refinery gasoline market is attributed to the increased degree of stabilization in East Texas. Heavy buying of naturals pushing prices upward, with higher levels probable. Weakness developing in bright and steam-refined stocks. Burner oils in demand for storage, with competitive bidding strengthening prices.

Mid-Continent.—Straightrun and natural gasolines strong. Burner oils active. Bright and steam-refined stocks soft.

East Coast.—Steam-refined and bright stocks show further weakness. Furnace and heavy oils improved.

Gulf Coast.—Gasolines and kerosenes slightly firmer. Rest of the market dull.

Pennsylvania.—Market listless. Bright and steam-refined stocks weak, with prices lower.

California.—Motor fuel consumption down owing to inability of marketers to move material to service stations in San Francisco Bay region because of strike. Naturals up.

Chicago.—Gasoline continues strong on fair buying. Burner oils stiffer. Lubricants easy. Naphthas quiet.

Equitable Distribution of Orders

Among benefits accruing from the plan is the much more equitable manner in which the gasoline purchases are allotted among the refiners. It was not uncommon in the former days of higgledy-piggledy, every-man-for-himself buying for some one refiner to receive more orders than he needed to get rid of his stock while other refiners would be searching for outlets and, failing to find them promptly, would dump their motor fuel on the market for whatever they could get for it.

The importance of this smoothed-out buying is recognized when it is realized that absence of tankage in East Texas results in distress gasoline accumulating almost over night. A. V. Bourque, Tulsa, secretary of the Western Petroleum Refiners Association, who worked with Howard Bennette, national co-ordinator of refinery operations, in getting the Washington-sponsored purchasing plan under way, has remained in East Texas to oversee putting the plan into operation and he is aiding in the task of steering gasoline orders to refineries where they may be needed and providing purchasers for gasoline seeking an outlet. These purchasers, of course, are the 21 major refining companies which have agreed to co-operate with the petroleum administration in the movement to bring order out of the chaotic conditions which ruled in East Texas.

Domestic buying of motor fuel slowed up somewhat the latter part of last week, although prices did not seem to be affected except in spots. The slight retardation in trading was attributed to the fact that some of the major buyers were laggard in giving instructions, with the result that there was a tendency on the part of East Texas stocks to back up. It was reported early this week, however, that the majors had reached an understanding by which purchases will be ordered out ratably, thus precluding delays and apparently effacing the last obstacle to prompt moving of the district's gasoline output.

Jobbers Still Cautious

Jobbers have been entering the market in a moderate degree during the last week, but as a whole they are still displaying the same caution that has characterized their policy for months. It is not believed now that the summer of 1934 will witness any really active buying by the jobbers. It is pointed out for one thing that the season of high consumption is of relatively short duration, and as the season already is well under way, it hardly is to be expected that jobbers will begin vigorous buying with the period of declining consumption and possible lowering of prices just a little distance ahead.

A peculiar condition which is the subject of comment lies in the fact that gasoline probably can be bought today through certain brokers in Chicago, Tulsa, St. Louis and other cities at lower prices than those paid in East Texas. These brokers made contracts with East Texas refiners under which they were to take specified quantities of gasoline throughout July. The prices fixed in these contracts are lower than those ruling now. Some of them are said to be 3¼ cents for low octane U. S. Motor material. In order to avoid inviting cancellation of his contract the broker must take his gasoline at regular intervals. If he has difficulty in finding a buyer at the current price he can sell under it and still make a profit. It is reported that some of this underselling actually has taken place, but as the quantities involved have been relatively small the effect on quotations has been negligible. Nevertheless it is believed the expiration of these contracts will have a tendency to add strength to the market.

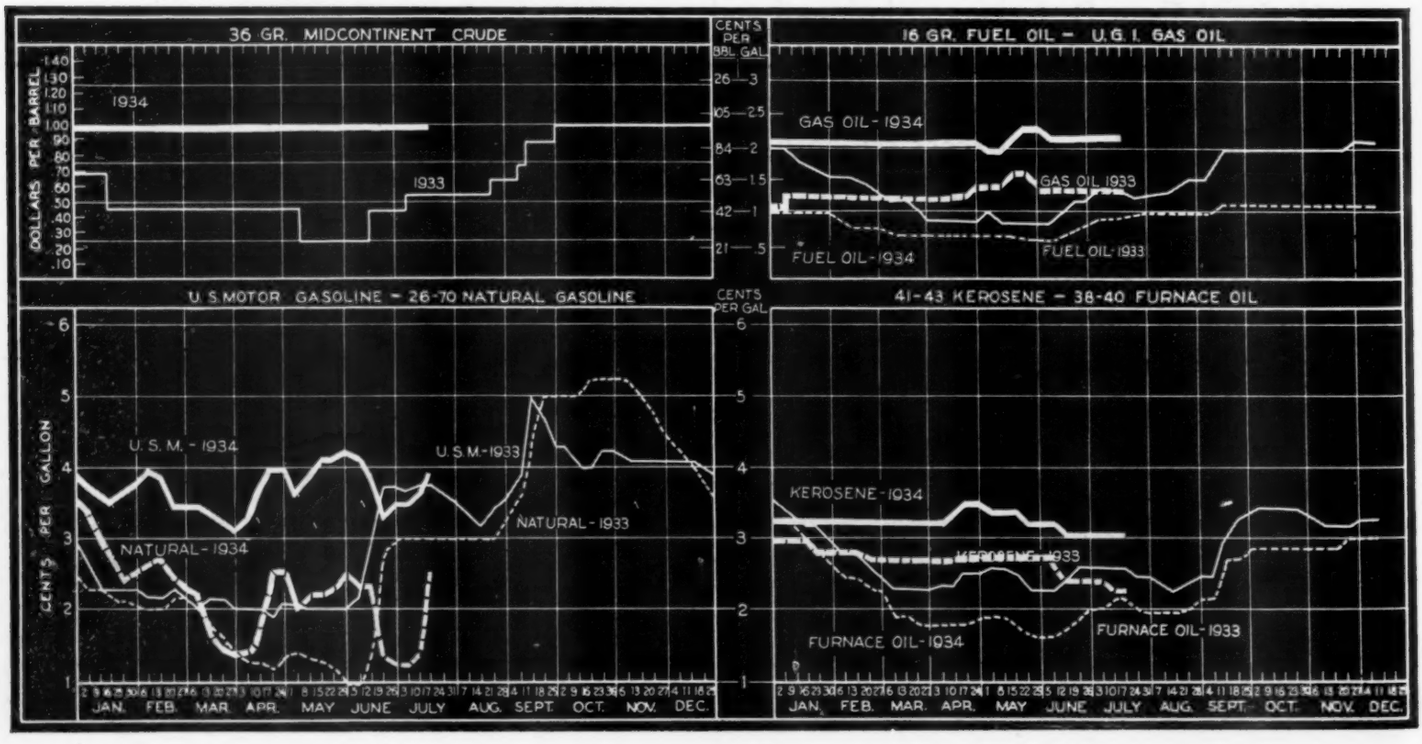
Some market students assert that if the added firmness achieved by the motor fuel market is to be maintained there will have to be a sharp curtailment of crude production allowables.

Natural Gasoline Market Strong

Natural gasoline was riding along on a wave of sturdy buying this week. The 26-70 grade was quoted at 2½ cents, as compared with 1⅜ to 1½ cents the week

(Continued on Page 28)

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Steam Refined Stocks and Bright Stocks Show Additional Weakness in East Coast Market

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, July 16.—Steam refined stocks and bright stocks, the demand for which has been slowing up for several weeks, developed additional price weakness in the past week and prices are generally lower in this market on all grades. The price declines applied to both domestic and export markets, although the latter receives the most attention in this area. In the export end the No. 8 color Pennsylvania grade bright stock was quoted in barrels for export movement today over a price range of 32 to 35 cents, these quotations representing a decline of 1 to 2 cents for the week and 3 to 5 cents per gallon under the recent highs.

Representative prices in barrels for export movement on steam-refined stocks were 23 cents for 600 S.R. unfiltered and 27 cents for 600 flash. For bulk movement prices were 6 to 7 cents per barrel under these quotations with a few buyers claiming that these prices could be shaded with orders. The so-called Western stocks also were weaker. These stocks for export are usually quoted basis the Gulf Coast with little domestic trading in this section. The pale and red oils at the Gulf also were easier although some of the largest manufacturers have not changed their quotations. The paraffin neutrals, especially those of low pour test, were not as weak as the cylinder stocks. However, price concessions were reported in these products made from Pennsylvania Grade and Mid-Continent crudes.

Trade opinions as to the cause of the decline in lubricants and the probable future trend vary widely. Some observers state that prices advanced out of line with the cost of production the latter part of last year and the first quarter of this year, and they say that the reactionary price trend was necessary as a corrective to prevent a large overproduction of oils which might flood the market later in the year.

Among most of the sellers this view does not find favor. They contend that the low prices which prevailed through 1932 and the greater part of 1933 were far below the cost of production and the advances of the past nine months have simply corrected this situation. They say that the present downward price trend is temporary and are predicting firm or higher prices the latter part of the year.

It is reasonably certain that the large increase in demand for lubricants which aided the lubricating oil manufacturers the first half of the year will not be continued. For the first five months of this year government figures show an increase of 30 per cent in the domestic shipments. This reflects in part an actual gain in demand for both industrial oils and motor oils over the slow half year period of 1933. At the same time there was speculative buying from refiners by jobbers and compounders and these shipments from refineries should be taken into consideration in gauging the probable demand for the last half of the year.

Foreign Oils

Those in touch with foreign conditions also state that refiners in this country will have additional competition from outside refineries in competing for foreign business. Two new plants completed in France in the past year have large facilities for manufacturing practically all grades of lubricants. Russian and Rumanian refiners have become more of a factor in European lubricating oil markets. Russian lubricants also have been made available in several South American markets. Just what permanent effect this foreign competition will have in the markets of this country remains to be seen. Refiners in the United States in the past have felt secure in their foreign lubricating oil business due to the quality of the crude from which their oils are obtained. Better processing methods, however, have added to the crudes suitable for lubricating oil manufacture and it is possible that refiners in this country are entering a new period of active competition in world markets for all grades of oils.

Heavy Oils

The market situation in this territory in regard to furnace oils and heavy oils was improved the last week by a ruling from Washington and a statement by R. G. Stewart, director of the Standard Oil Co. of New Jersey in charge of domestic marketing. Under a ruling from Washington, Region 1, which includes New England, New York and the Atlantic Seaboard states extending to Virginia, is permitted to sell Nos. 1, 2 and 3 oils with a top price of 1 cent per gallon over the posted price on the date the contract is signed and one-half cent above in the case of Nos. 4, 5 and 6 oils. Formerly the minimum top price had been 25 per cent above the posted price in the case of the first group of oils and 20 per cent in the case of heavier oils. Trouble has been experienced with these contracts from the time they were first offered to buyers early in May. The top price provision was interpreted as the probable price that would prevail when the consuming season started.

Under the new arrangement a contract made with consumers on furnace oils in the case of No. 2 oil will start with a posted tank wagon price of 7 cents and a top price of 8 cents instead of 8¾ cents as provided for under the 25 per cent clause. The top price for No. 1 oil will be 9½ cents instead of 10¾ cents. Similar reductions will apply to the other grades.

With this guarantee it is believed that all classes of consumers will be more receptive in regard to renewing their contracts. There is still confusion in regard to the No. 4 classification. Under the commercial standards this is an industrial grade but its specifications have been changed by some sellers so that it is suitable for furnace oil and has been widely sold in this area at lower prices. To meet this competition in certain areas sellers who previously had announced a posted tank wagon price of 7 cents have reduced their base price to 6½ cents. These sellers are asking 7 cents for the Nos. 2 and 3 grades and 8½ cents for No. 1.

Adequate Supplies

Mr. Stewart, in his statement which is published in full elsewhere in this issue, sought to allay fears of a shortage of all grades of fuels and high prices for the coming season. He pointed out that California with its 70,000,000 bbls. of fuel in storage is an assured source of supply as needed with 22,000,000 bbls. to move around to the East Coast during 1934. He also said large supplies were available in South America subject to the regulation of the Federal Government in regard to importation.

Mr. Stewart predicted that the price advance on furnacce oils contracts would not exceed one-half ccent per gallon during the season. Thus the top on a contract starting at 7 cents will probably not be more than 7½ cents during the life of the agreement which in most cases is one year.

This statement by the most important distributor in this territory was interpreted to mean that adequate fuel supplies are assured for the coming year at prices which will show little change from their present levels. This official viewpoint as an executive of another company pointed out "about takes care of the fuel market for the next several months." Although probably not intended for that purpose the statement has also been interpreted as indicating there will be no important advances in crude oil prices from their present levels. There is a close relationship between fuel oil, crude and gasoline prices due to the fact that fuel oil and crude are the raw materials used in the manufacture of gasoline and the pegging of fuel prices might indicate a similar attitude in regard to crude oil and gasoline prices by the company concerned. Other observers, however, say that the New Jersey Standard was primarily concerned in strengthening the competitive position of fuel oil, which has lost many customers in this territory to the coal and gas people due to a misunderstanding in regard to the attitude of the industry as to future prices for all oils used as fuels.

Prices

The domestic gasoline tank car prices as posted by the major distributors in this territory are unchanged from last week, ranging from 6 to 7 cents depending largely on octane rating. The domestic movement is reported heavy on contracts but the spot market trading continues slow.

In the export gasoline market, spot trading is at a standstill. The prices quoted by most companies at the Gulf Coast are nominal for all spot business reported has been going to European refiners. One French cargo offered to American sellers is reported to have been finally placed with a Rumanian refinery at 4 cents basis the Gulf for 64-66 375 endpoint material. This price is at least one-half cent below the low quotation

(Continued on Page 33)

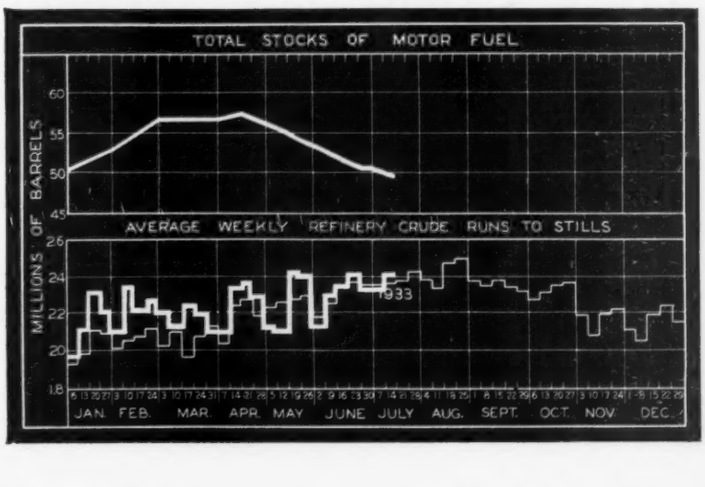
American Petroleum Institute Weekly Refinery Statistics

Week Ending July 14, 1934

	Capacity reporting per cent	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	479,000	15,406,000	9,882,000
Appalachian	93.3	98,000	1,552,000	1,031,000
Indiana, Illinois, Kentucky	94.6	349,000	8,032,000	3,827,000
Oklahoma, Kansas, Missouri	83.7	257,000	5,172,000	3,476,000
Inland Texas	47.6	109,000	1,099,000	1,580,000
Texas Gulf	97.5	471,000	3,858,000	7,597,000
Louisiana Gulf	96.4	108,000	1,184,000	1,701,000
North Louisiana and Arkansas	83.7	62,000	269,000	511,000
Rocky Mountain	66.7	35,000	930,000	625,000
California	96.9	438,000	12,315,000	78,684,000
Total United States	89.7	2,406,000	49,817,000	*108,914,000

*Revised fuel oil stocks, week ending July 7, 107,121,000 bbls.

Note: Finished motor stocks shown in graph and in table include those at refineries, at bulk terminals and in pipe lines, but do not include 5,000,000 to 7,000,000 bbls. of unfinished gasoline which could be reprocessed quickly.



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

Quotations are exclusive of the Federal tax of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

	July 17		July 10	
OKLAHOMA (Group 3)—				
U. S. Motor grades:				
Below 60 octane	.03⅞	.04⅛	.03⅝	.03⅞
60-64.9 octane	.04⅛	.04⅝	.04⅝	.04⅞
65-70 octane	.04¾	.04⅞	.04⅞	.05⅛
60-62 400 grades:				
Below 60 octane	.03⅞	.04⅛	.03¾	.04
60-64.9 octane	.04⅛	.04¾	.04¾	.05
65-70 octane	.04⅞	.05⅛	.05	.05¼
64-66 375	.04⅛	.04⅜	.04⅛	.04⅜
68-70 360	.04¼	.04½	.04¼	.04½
NORTH TEXAS—				
U. S. Motor grades:				
Below 60 octane	.03¾	.03⅞	.03⅜	.03⅝
60-64.9 octane	.04⅜	.04½	.04⅜	.04⅝
65-70 octane	.04½	.04¾	.04¾	.05
60-62 400	.03⅞	.04	.03½	.03¾
64-66 375	.04		.04⅛	.04¼
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 60 octane	.04⅛	.04¼	.04⅛	.04⅜
60-64.9 octane	.04⅞	.05	.05¼	.05½
65-70 octane	.05⅛	.05¼	.05⅜	.05⅝
60-62 400	.04¼	.04⅜	.04¼	.04½
68-70 360	.04⅜	.04½	.04⅜	.04½
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 60 octane	.04⅛	.04¼	.04⅛	.04⅜
60-64.9 octane	.04⅞	.05	.05¼	.05½
65-70 octane	.05⅛	.05¼	.05⅜	.05⅝
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 60 octane	.03⅞	.04	.03¾	.04
60-64.9 octane	.04⅝	.04¾	.04½	.04¾
65-70 octane	.04¾	.05	.04¾	.05
60-62 400	.03⅞	.04½	.03¾	.04
64-66 375	.04⅛	.04¼	.04	.04¼
68-70 360	.04⅜	.04½	.04¼	.04½
Aviation fighting grade	.05	.05¼	.05	.05¼
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.05⅝	.05¾	.05⅝	.05¾
60-64.9 octane	.06½	.06⅝	.06½	.06⅝
65-70 octane	.07	.07⅛	.07	.07⅛
68-70 350	.06½		.06½	
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.06	.07½
58-60 400	.08	.09	.07	.09
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.06	.06¼	.06	.06¼
Baltimore	.06	.06¼	.06	.06¼
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	.06¼	.06½	.06¼	.06½
Philadelphia	.06½	.06¾	.06½	.06¾
Boston	.0645	.0670	.0645	.0670
Baltimore	.06¼	.06½	.06¼	.06½
Charleston, S. C.	.06¼	.06½	.06¼	.06½
U. S. Motor, 65 and above:				
*New York (Bayonne)	.06½	.06¾	.06½	.06¾
Philadelphia	.06¾		.06¾	
Boston	.0670	.07	.0670	.07
Baltimore	.06½	.06¾	.06½	.06¾
Charleston, S. C.	.06½	.06¾	.06½	.06¾

*All grades of gasoline one-fourth cent less for small barge shipments.

GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.04⅞	.05⅛	.04¾	.05
60-64.9 octane	.05⅛	.05⅜	.05	.05¼
65 octane and higher	.05⅜	.05⅝	.05¼	.05½

Naphthas

	July 17		July 10	
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.05⅝		.05⅝	
CHICAGO (based on Oklahoma Group 3)—				
50-52 450 (blending)	.04	.04¼	.03¾	.04
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾	.08	.07¾	.08
Lacquer diluent, 140 ib.p.-200 e.p.	.08¾	.09	.08¾	.09
Rubber solvent, 68-70 gr., 100 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Stoddard solvent, 300 i.b.p.-410 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
Pet. thinner, 290-300 i.b.p.-415 e.p., over 83° flash	.06¼	.06½	.06¼	.06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06¾	.07	.06¾	.07
Petroleum spirits	.05¾	.06	.05¾	.06

Natural Gasolines

	July 17		July 10	
OKLAHOMA (Group 3)—				
Grade 26-70	.02½		.01⅝	.01½
Grade 18-55	.03		.01⅞	.02¼
Low vapor pressure grades:				
15 lb. v.p. (max.)	.03¼	.03½	.02⅜	.02¾
11 lb. v.p. (max.)	.03½		.02⅞	.03
NORTH TEXAS—				
Grade 26-70	.02⅝		.01¼	.01⅜
Grade 18-55	.02⅞		.01¾	.01⅞
Low vapor pressure grades:				
15 lb. v.p. (max.)	.03⅜		.02¼	.02⅜
11 lb. v.p. (max.)	.03⅝		.02¾	.02⅞
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.02⅞		.01¾	.01⅞
CALIFORNIA—				
75-78 375	.06	.06¾	.05½	.06½

Kerosenes

(All kerosenes water white)

	July 17		July 10	
OKLAHOMA (Group 3)—				
41-43	.03¼	.03⅜	.03⅛	.03⅜
42-44	.03⅜	.03⅝	.03⅜	.03⅝
NORTH TEXAS—				
40-41	.02⅞	.03⅛	.02⅞	.03⅛
41-43	.03	.03¼	.03	.03¼
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.03¼		.03¼	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.03⅜	.03½	.03⅜	.03½
PENNSYLVANIA (inland refineries)—				
45	.04⅜	.04½	.04⅜	.04½
46	.04½	.04⅝	.04½	.04¾
47	.04⅝	.04¾	.04⅝	.04⅞
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03⅛	.03¼	.03⅛	.03¼
42-44	.03⅜	.03½	.03⅜	.03½
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¾	.05¼	.04¾	.05¼
NEW YORK (Bayonne, N. J.)—				
41-43	.05¼	.05½	.05¼	.05½
GULF COAST (domestic)—				
41-43	.04½	.04⅝	.04⅜	.04½

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	July 17		July 10	
Breeze (screenings)	5.00		5.00	
Pile run	5.00		5.00	
Direct from still	6.00		6.00	
Lump and egg	7.00	8.00	7.00	8.00

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

	July 17		July 10	
OKLAHOMA (Group 3)—				
32-36 straw	.02½	.02⅝	.02⅜	.02½
36-38 straw	.02½	.02⅝	.02½	.02⅝
38-40 straw	.02⅝	.02½	.02⅜	.02½
38-40 prime white	.02⅝	.02¾	.02½	.02⅝
NORTH TEXAS—				
38-40 straw	.02⅝	.02¾	.02½	.02¾
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.02⅞	.03	.02⅞	.03
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.02⅝	.02¾	.02⅝	.02¾
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.02¾	.02½	.02¾	.02½
38-40 straw	.02¾	.02⅝	.02⅝	.02⅝
38-40 prime white	.02½	.02⅝	.02½	.02⅝
NEW YORK (Bayonne, N. J.)—				
36-40 (No. 1 grade)	.05¼	.05½	.05¼	.05½
32-36 (No. 2 grade)	.04¾	.05	.04¾	.05
21 industrial (No. 4 grade)	.04½	.05	.04½	.05

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gallon; Diesel and fuel oils per barrel)

	July 17		July 10	
OKLAHOMA (Group 3)—				
32-36 gas oil cracking stocks	.02½	.02¼	.02½	.02¼
U.G.I. gas oil	.02⅛	.02⅜	.02⅛	.02⅜
32-36, zero to 15 gas oil	.02⅜	.02½	.02⅜	.02½
28-30 No. 3 burner oil	.95	1.00	.95	1.00
28-30, zero to 10 fuel oil	.90	.95	.90	.95
26-30, zero to 10 fuel oil	.85	.95	.85	.95
24-26 fuel oil	.75	.80	.75	.80
20-22 fuel oil	.67½	.70	.67½	.70
Below 16 fuel oil	.62½	.65	.62½	.65
NORTH TEXAS—				
32-36 gas oil, industrial	.01⅞	.02	.01⅞	.02
22-26 fuel oil	.67½	.70	.67½	.70
Below 20 fuel oil	.57½	.62½	.57½	.62½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
32-36 gas oil, zero	.02½	.02⅝	.02½	.02⅝
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.02½	.02⅝	.02½	.02⅝
32-36 gas oil	.02⅝	.02½	.02⅝	.02½
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.02⅛	.02¼	.02⅛	.02¼
28-30 zero to 10, fuel oil	.97½	1.02½	.97½	1.02½
26-28 zero to 10, fuel oil	.87½	.92½	.87½	.92½
22-26 zero to 10, fuel oil	.77½	.82½	.77½	.82½
18-22 zero to 10, fuel oil	.62½	.67½	.62½	.67½
Below 18 fuel oil	.57½	.62½	.57½	.62½

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel less in all these areas.

PENNSYLVANIA (inland refineries)—				
36-40	.04		.04	
CALIFORNIA—				
30-34 gas oil per bbl.	1.10	1.20	1.05	1.15
27 plus Diesel	1.10	1.20	1.05	1.15
27 plus Diesel (bunkers)	1.13	1.25	1.13	1.25
12-16 (bunker at tidewater)	.82	.85	.80	.85
10-16 (cargo lots)	.65	.75	.66	.75
12-17 (tank cars)	.60	.75	.60	.75
10-17 (inland refineries)	.55	.65	.55	.65
GULF COAST—				
28-30 gas oil	.03½	.03¾	.03½	.03¾
28-30 Diesel (bunkers)	1.80		1.80	
Bunker C (bulk cargoes)	.95	1.00	.95	1.00
Bunker C (bunkers)	1.05	1.10	1.05	1.10
NEW YORK (Bayonne, N. J.)—				
27 plus, gas oil	.04½	.05	.04½	.05
28-30 Diesel (lighterage 6½ cents per bbl.)	1.95		1.95	
28-30 Diesel (tank cars)	.04¾	.05	.04¾	.05
*Bunker C (to ocean-going ships in N. Y. harbor)	1.30		1.30	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

	July 17		July 10	
OKLAHOMA (Group 3)—				
Zero to 10 Cold Test:				
150-3	.10		.10	
180-3	.11¼		.11¼	
180-4	.10¾		.10¾	
200-3	.11¾		.11¾	
200-4	.11¼		.11¼	
240-3	.13¾		.13¾	
240-4	.13¼		.13¼	
280-3	.14¾		.14¾	
280-4	.14		.14	
300-3½	.15¼		.15¼	
400-4	.17¼		.17¼	
100-2 paraffin oil	.05¾		.05¾	
15-30 Cold Test:				
200-3	.10¾		.10¾	
200-4	.10¼		.10¼	
240-3	.12¾		.12¾	
240-4	.12¼		.12¼	
280-3	.13¾		.13¾	
280-4	.13		.13	
GULF COAST—				
Pale Oils:				
200-3	.07½		.07½	
300-3	.08	.08¼	.08	.08¼
500-3½	.09	.09¼	.09	.09¼
750-3½	.09½	.09¾	.09½	.09¾
1,200-3½	.10	.10¼	.10	.10¼
2,000-4	.10¼	.10½	.10¼	.10½
Red Oils:				
200-5-6	.06½		.06½	
300-5-6	.07	.07¼	.07	.07¼
500-5-6	.08	.08¼	.08	.08¼
750	.08½	.08¾	.08½	.08¾
1,200-5-6	.09	.09¼	.09	.09¼
CALIFORNIA—				
Pale Oils:				
100-2½-3	.23	.25	.23	.25
200-2½-3	.23	.25	.23	.25
300-3-3½	.23	.25	.23	.25
350-3-4	.23	.25	.23	.25
400-3-4	.23	.25	.23	.25
450-3-4	.23	.25	.23	.25
550-3-4	.23	.25	.23	.25
600-3-4	.23	.25	.23	.25
Red Oils:				
200-4-5	.23	.25	.23	.25
300-5-6	.23	.25	.23	.25
350-5-6	.23	.25	.23	.25
400-5-6	.23	.25	.23	.25

450-5-6	.23	.25	.23	.25
500-5-6	.23	.25	.23	.25
600-5-6½	.23	.25	.23	.25
700-6½ plus	.23	.25	.23	.25
750-6½ plus	.23	.25	.23	.25
900-6½ plus	.23	.25	.23	.25
PENNSYLVANIA—				
150 vis. at 70° F., 3 color; 400-405 flash:				
Zero pour test	.25½	.26	.25½	.26
10 pour test	.24½	.25	.24½	.25
15 pour test	.24	.24½	.24	.24½
25 pour test	.23	.23½	.23	.23½
180 vis. at 70° F., 3 color:				
25 pour test	.26½	.27	.26½	.27
200 vis. at 70° F., 3 color:				
Zero pour test	.31½	.32	.31½	.32
10 pour test	.30½	.32	.30½	.32
15 pour test	.30	.30½	.30	.30½
25 pour test	.29½	.30	.29½	.30

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	July 17		July 10	
Bright Stocks:				
190-200 D	.25¾		.25¾	
150-160 D, 0-10	.23		.23	
150-160 D, 10-25	.22½		.22½	
150-160 25-40	.22		.22	
150-160 E	.22		.22	
Steam refined:				
630 light green (treated)	.14½		.14½	
600 light green (untreated)	.07	.09	.07	.09
600 dark green (untreated)	.05	.08	.05	.08
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.26½	.27	.28	.28½
15 pour test	.26	.26½	.27½	.28
20 pour test	.25½	.26	.27	.27½
25 pour test	.25	.25½	.26½	.27
Steam refined:				
600	.15	.15½	.16	.16½
650	.18	.18½	.19	.20½
600 Pennsylvania flash	.19	.19½	.20	.20½
630 Pennsylvania flash	.23½	.24	.24½	.25
600 Warren E filtered	.19	.19½	.20	.20½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	July 17		July 10	
124-126 white crude scale	.03¼	.03⅜	.03¼	.03⅜
PENNSYLVANIA—				
122-124	.0360		.0360	
124-126	.0365		.0365	
NEW YORK HARBOR—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
128-130	.0480	.0495	.0480	.0495
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.03¼	.03½	.03¼	.03½
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03⅛	.03¼	.03⅛	.03¼
Lily white	.06¾	.07¼	.06¾	.06⅞
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0525
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F.

Export Prices

GASOLINE

GULF COAST—	July 17		July 10	
U. S. Motor	.04⅛	.04¼	.04⅛	.04¼
60-62 400	.04¼		.04¼	
61-63 390	.04⅜	.04½	.04⅜	.04½
64-66 375	.04½	.04⅝	.04½	.04⅝
LOS ANGELES, CALIF.—				
U. S. Motor grades:				
53-55 octane	.04	.04¼	.04	.04¼
55-65 octane	.04¼	.04½	.04¼	.04½
65-67 octane	.04½	.04¾	.04½	.04¾
67-69 octane	.04¾	.05	.04¾	.05
Above 69 octane	.05	.05¼	.05	.05¼
58-60 400 endpoint	.04¾	.05½	.04¾	.05½
KEROSENE				
GULF COAST—				
41-43 prime white	.04	.04¼	.04	.04¼
41-43 water white	.04⅛	.04¼	.04⅛	.04¼
44 water white	.04¼	.04⅜	.04¼	.04⅜
LOS ANGELES, CALIF.—				
41-43 water white	.04¼	.04¾	.04¼	.04¾
LUBRICANTS				
NEW YORK (f.a.s. in barrels)—				
Cylinder Stocks:				
600 Warren E	.26	.27	.27	.28
600 S.R. unfiltered	.22½	.23	.25	.25½
650 S.R. unfiltered	.25½	.26	.27	.27½
600 flash S.R.	.26½	.27	.28	.28½
630 flash S.R.	.31	.32	.32	.33
Bright Stocks:				
8 color	.32	.33	.33½	.34½
6½ plus color, in dilution	.30	.32	.32	.32½
NEUTRAL OILS				
200-3 color	.34	.35	.35	.36
150-3 color	.28	.29	.29	.31
PARAFFIN WAX (Fully Refined)				
NEW YORK (prices per pound)—				
120-122 a.m.p.	.0405	.04¼	.0405	.04¼
123-125 a.m.p.	.0430	.0455	.0430	.0455
125-127 a.m.p.	.0440	.0465	.0440	.0465
128-130 a.m.p.	.04¾	.0490	.04¾	.0490
130-132 a.m.p.	.0495	.0505	.0495	.0505
133-135 a.m.p.	.0540	.0565	.0540	.0565
135-137 a.m.p.	.0565	.0590	.0565	.0590

Crude Oil Gravity Table

Degrees gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	4 Carson, Hutchinson, and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas, and Louisiana	9 Gulf Coast, Texas, and Louisiana	10 Coastal Valley, Louisiana
Below 20	....	....	....	....	....	....	....	$.82	$.82	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.78	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.05	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.12	1.10	.94
37-37.9	1.02	.97	.97	.85	.76	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.12	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

Note.—Effective June 1, 1934, Texas Co. purchases Texas Panhandle crude on a sweet crude and sour crude basis. Panhandle sweet crude is paid for on a basis of the Gray County prices posted above, and Panhandle sour crude is paid for on a basis of Carson and Hutchinson County prices posted above.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Phillex Oil Co., which begins with below 31° at 88 cents.

Column 1.—Effective September 29, Texas Co. in Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Phillex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; Oct. 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2.—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective September 29, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29°, 84 cents, with 2 cents added for each degree up to 40 and over at $1.08.

Column 3.—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4.—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Phillex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5.—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Phillex Oil Co posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Colum 6.—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30, by Texas Co. which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7.—Effective September 29, by Stanolind Oil & Gas Co.

Column 8.—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana: 20-20.9°, 84 cents with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana: Below 20°, 72 cents with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20° 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9.—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule of 2 cents on each degree, but changed it on September 30.)

Column 10.—Effective September 29, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 30)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas	$1.00
Stratman, Kans. (Sept. 29, 1933)	1.03
Corsicana (heavy) (June 17, 1933)*	.30
Other fields	(See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., and Empire Oil & Refining Co.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard Glasscock, Mitchell (Sept. 29, 1933)	$.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933)	.76
Pecos County, Yates shallow pool (Sept. 29, 1933)*	.65
Jones and Fisher Counties	See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers	(See gravity table)
Tomball (see note)*	$1.15
Livingston (Sept. 29, 1933)†	1.00
Cleveland (Jan. 11, 1934)	1.00
Greta (Sept. 29, 1933)	.85
Refugio, light	(See gravity table)
Refugio, heavy (Sept. 29, 1933)‡	.85
Markham and High Island	(See Gulf Coast gravity table)
Conroe	(See Conroe gravity table)

Note—Tomball, effective September 29, by Humble Oil & Refining Co., and October 2, by Stanolind Oil & Gas Co.

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy, by Humble Oil & Refining Co. Cleveland (Liberty County), posted by Magnolia Petroleum Co.

South Central and Southwest Texas

(See note below table)

Darst Creek	$.87
Mirando	.80
Luling (Sept. 29, 1933)	.75
Pettus	1.05
Salt Flat	.87
Lytton Springs (Sept. 29, 1933)	.95
Duval County (Sept. 29, 1933)	.80
Saxet	.85

Note—Effective on September 29 by Humble Oil & Refining Co., in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by Humble Oil & Refining Co. and Texas Co.

(Continued on Page 30)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

July 17, 1934

Taxes

The gasoline quotations given in the following tables include the 1 cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon, or 3 cents a gallon off retail prices, is permitted for purchases running between 3,000 and 10,000 gallons a month, and 2 cents a gallon off tank wagon, or 4 cents a gallon off retail prices, for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Denver, Colo.	18.0	20.0	6.0	10.0
Pueblo	18.0	20.0	6.0	13.0
Grand Junction	19.0	21.0	6.0	15.0
Casper, Wyo.	18.0	20.0	5.0	11.5
Cheyenne	18.0	20.0	5.0	13.0
Butte, Mont.	21.0	23.0	5.0	17.5
Billings	21.0	23.0	6.0	16.5
Helena	22.5	24.5	6.0	17.5
Great Falls	20.0	22.0	6.0	17.5
Salt Lake, Utah	18.5	20.5	5.0	16.0
Boise, Idaho	22.5	24.5	6.0	18.0
Twin Falls	22.5	24.5	6.0	18.0
Albu'que, N. M.	18.0	20.0	*7.0	13.0

*One-cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Chicago	15.3	17.3	4.0	9.7
Decatur, Ill.	16.0	18.0	4.0	10.3
E. St. Louis	16.0	14.5	4.0	9.5
Joliet	14.2	16.2	4.0	10.2
Peoria	14.7	13.9	4.0	10.2
Quincy	16.6	17.1	4.0	10.0
Davenport, Ia.	16.6	17.1	4.0	10.1
Des Moines	14.0	17.1	4.0	8.0
Mason City	16.6	17.1	4.0	9.3
Sioux City	12.9	13.3	4.0	9.7
Duluth, Minn.	17.3	19.3	4.0	10.4
Mankato	16.8	16.8	4.0	10.3
Minneapolis	15.4	17.4	4.0	10.4
LaCrosse, Wis.	18.3	20.3	4.3	10.8
Green Bay	17.7	19.7	5.0	10.2
Milwaukee	17.1	19.1	5.0	9.7
Madison	17.4	19.4	5.0	9.9
Detroit, Mich.	16.0	18.0	4.0	10.5
Grand Rapids	16.7	17.7	4.0	10.3
Saginaw	17.0	18.0	4.0	10.5
Evansville, Ind.	17.7	19.7	5.0	10.0
Indianapolis	17.9	19.4	5.0	10.3
South Bend	18.2	20.2	5.0	10.5
Fargo, N. Dak.	17.9	19.9	4.0	12.1
Huron, S. Dak.	18.8	20.8	5.0	11.4
Sioux Falls	18.4	20.4	5.0	10.9
Kans. C., Mo.*	15.0	15.0	4.0	9.2
Springfield	15.1	17.1	3.5	9.1
St. Louis	15.0	17.0	3.5	8.7
St. Joseph*	15.3	15.0	4.0	8.8
Wichita, Kans.	16.8	16.6	4.0	10.2
Bartlesville, Ok.	16.0	18.5	5.0	10.5

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

Discounts to dealers, effective March 1, 1934: Undivided accounts, 4 cents a gallon on Red Crown Ethyl and Standard Red Crown, divided accounts, 3½ cents a gallon on Red Crown Ethyl and Standard Red Crown.

Stanolax Furnace Oil in Chicago

Effective June 27, 1934, f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), under 100 gallons, 8¼ cents. Effective May 16, 1934, No. 2 (30-34 stw. zero), under 150 gallons, 7¾ cents; No. 3 (22-26 zero), under 150 gallons, 7⅛ cents; No. 4 (12-16 zero), under 400 gallons, 6 cents; viscosity of No. 4, 90-115 at 100° F.; No. 5, under 400 gallons, 5¾ cents. For deliveries above stated quantities deduct 1 cent.

Naphths

	Tank wagon*
Oleum spirits	16 9
V.M.&P. naphtha	18 0
Cleaners' naphtha	18 0
Stanisol	18.0

*Prices include 3-cent Illinois tax, but not 1-cent Federal tax.

Prices f.o.b. Chicago, September 13, 1933. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.	19.0	22.0	7.0	14.5
Augusta	20.0	22.0	7.0	14.5
Macon	20.0	22.0	7.0	14.5
Savannah	20.0	22.0	7.0	14.0
Birm'ham, Ala.	21.5	23.5	8.0	12.0
Mobile	20.5	22.5	8.0	12.0
Montgomery	22.5	24.5	8.0	15.0
Jackson, Miss.	19.5	21.5	7.0	13.0
Vicksburg	16.5	18.5	7.0	14.0
Jack'ville, Fla.	20.0	22.0	8.0	11.5
Miami	20.0	22.0	8.0	13.5
Pensacola	17.0	19.0	8.0	13.5
Tampa	20.0	22.0	8.0	12.5
Lexington, Ky.	18.5	20.5	6.0	11.5
Covington	17.5	19.5	6.0	11.5
Louisville	18.0	20.0	6.0	11.0
Paducah	16.0	18.0	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	17.0	19.0	5.0	8.0
Fort Worth	17.0	19.0	5.0	8.0
Houston	16.0	18.0	5.0	8.5
San Antonio	16.0	18.0	5.0	8.5
El Paso	18.0	20.0	5.0	11.0
Muskogee, Ok.	16.0	18.0	5.0	7.5
Okla. City	15.0	17.0	5.0	8.5
Tulsa	16.0	18.0	5.0	8.5
Ft. Smith, Ark.	16.0	18.0	5.0	8.0
Little Rock	16.5	18.5	7.5	9.0
Texarkana	17.0	19.0	5.0	8.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Atl'tic City, N.J.	19.0	18.5	4.0	10.0
Newark	18.3	17.8	4.0	9.5
Annapolis, Md.	19	19.1	5.0	10.0
Baltimore	19.1	18.6	5.0	9.5
Cumberland	20.6	20.1	5.0	12.7
Wash'g'n, D. C.	17.3	16.8	3.0	11.5
Danville, Va.	21.7	21.2	6.0	12.9
Norfolk	20.2	19.7	6.0	11.3
Petersburg	21.0	20.5	6.0	11.4
Richmond	20 6	20.1	6.0	11.7
Roanoke	21.8	21.3	6.0	12.9
Charls'n, W. Va.	20.0	19.5	5.0	12.6
Parkersburg	19.3	18.8	5.0	11.2
Wheeling	20 0	19.0	5.0	12.2
Charlotte, N. C.	23.4	22.5	7.0	13.5
Hickory	23.7	23.0	7.0	13.7
Mt. Airy	23.7	23.2	7.0	13.8
Raleigh	23.3	22.5	7.0	13.3
Salisbury	23.5	21.0	7.0	13.4
Charleston, S. C.	21.2	20.7	7.0	11.3
Columbia	23.0	22.0	7.0	13.3
Spartanburg	23.4	22.4	7.0	13.5

Price basis to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Omaha	17.0	17.0	5.0	9.0
McCook	17.7	18.4	5.0	6.9
Norfolk	17.0	17.0	6.0	9.0
North Platte	17.8	18.0	5.0	9.0
Scottsbluff	18.3	18.3	5.0	9.0

Note—Discount to dealers, including any rentals under lease and agency agreements: Undivided accounts, Standard Red Crown and Red Crown Ethyl Gasoline 4 cents, Reliance (third brand) 3 cents, under service station price. Divided accounts, Standard Red Crown Ethyl Gasoline 3½ cents, Reliance (third brand) 2½ cents, under service station price. Discounts to consumers covered only by form CD-1, official commercial consumer contract.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	20.8	15.0	*7.0	†10.0
Baton Rouge	20.2	19.7	6.0	†12.0
Alexandria	21.1	19.0	*7.0	†10.0
Lafayette	21.3	20.8	*7.0	†12.0
Lake Charles	21.2	20.7	*7.0	†12.0
Shreveport	19.0	16.0	6.0	†12.0
Knoxville, Tenn.	24.7	19.5	8.0	13.0
Memphis	23.1	18.5	8.0	10.5
Chattanooga	24.5	19.5	8.0	12 0
Nashville	24.0	18 5	8.0	11.0
Bristol	24.5	17.3	8.0	14.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax.

Price bases to dealers: Divided dealers at dealer price, which is 2½ cents above tank car; undivided dealers at dealer price less one-half cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank wagon†	Posted retail	Incl'ds tax of	Kero. tank wagon
San Francisco	17.5	19.5	4.0	12.5
Los Angeles	15.5	17.5	4.0	12.5
Fresno, Calif.	18.0	20.0	4.0	14.0
Phoenix, Ariz.	20.0	22.0	6.0	‡16.0
Reno, Nev.	20.0	22.0	5.0	15.5
Portland, Ore.	20.0	22.0	6.0	13.5
Seattle, Wash.	20.0	22.0	6.0	13.5
Tacoma	20.0	22.0	6.0	13.5
Spokane	23.0	25.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5 cents state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Philadelphia, Pa.	16.5	17.5	4.0	10 0
Pittsburgh	16.0	18.0	4.0	10 0
Allentown	15.5	17.5	4.0	10.0
Erie	16.0	18.0	4.0	9.0
Scranton	16.0	18.0	4.0	10.0
Altoona	16.0	18.0	4.0	10.0
Dover, Del.	16.0	18.0	4.0	10.0
Wilmington	15.5	17.5	4.0	9.0
Springf'd, Mass.	15 5	17.5	4.0	8.75
Worcester	15.5	17.5	4.0	9.0
Hartford, Conn.	15.0	17.0	3.0	8.5
New Haven	13 0	15.0	3 0	8.5
Providence, R.I.	11.5	13.5	3.0	8.5

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

New York and Part of New England

STANDARD OIL CO. OF NEW YORK

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	16.5	17.5	4.0	9.0
Met. New York	16.5	17.5	4.0	8.5
Buffalo	17.5	18.5	4.0	9.0
Rochester	16.0	17.0	4.0	9.25
Syracuse	17.0	18.0	4.0	9.25
Boston, Mass.	16.0	17.0	4.0	8.5
Portland, Me.	18.2	19.2	5.0	8.75
Manch't'r N. H.	19.2	20 2	5.0	9.0
Burlington, Vt.,	19.8	20.8	5.0	9.75

Commercial consumers allowed 2 cents discount below service station prices in accordance with CD-1 of oil industry's code.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent, effective July 22.

Canada*

IMPERIAL OIL, LTD.
Imperial 2-Star Gasoline

	Gasoline: Tank wagon	Service station	Incl'ds tax of	Kero. tank wagon
Hamilton, Ont.	†21.5	24.5	6.0	17.5
Toronto, Ont.	†21.5	24.5	6.0	17.5
Brandon, Man.	20.2	23.2	7.0	21.5
Winnipeg, Man.	23.7	31.7	7.0	20.2
Regina, Sask.	29.0	32.0	6.0	21.5
Saskatoon, Sask.	31.2	34.2	6.0	24.2
Edmonton, Alta.	31 2	34.2	6.0	23.7
Calgary, Alta.	28.5	31.5	6.0	21.0
Vancouver, B.C.	†28.0	31.0	7.0	24.0
Montreal, Que.	24.0	27.0	6.0	17.5
St. John, N.B.	27.5	31.5	5.0	21.0
Halifax, N. S.	26.0	30.0	6.0	21.0

Imperial gallon used in Canada. †Governed by service station price.

Maritime provinces, all dealers 4 cents off service station price. All other provinces, open dealers 3 cents off service station price and 1 cent additional to 100 per cent accounts.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Continental Oil Co. July 8 reduced tank wagon and station gasoline 2½ cents in Salt Lake City. July 9, reduced tank wagon and station gasoline 1½ cents in Albuquerque. July 10, reduced tank wagon and station gasoline 1½ cents in Grand Junction. July 12, advanced tank wagon and station gasoline in southern Idaho and in Utah except Salt Lake City.

Standard Oil Co. (Kentucky) June 26 reduced tank wagon kerosene 1 cent in Louisville. June 30, reduced tank wagon and station gasoline 1 cent in Paducah; July 2, reduced these prices 1 cent further; July 6, reduced them one-half cent further. July 4, reduced tank wagon and station gasoline 1 cent in Pensacola.

Standard Oil Co. of California July 10 reduced tank wagon and station gasoline one-half cent in Reno.

Atlantic Refining Co. July 7 reduced tank wagon and station gasoline 1 cent in Worcester. July 3, reduced tank wagon and station gasoline 1½ cents in Hartford. July 5, reduced tank wagon and station gasoline 1 cent in Providence.

Standard Oil Co. of New York July 10 reduced tank wagon and station gasoline one-half cent in Boston.

CRUDE OIL PRICE CHANGES

The Standard Oil Co. of California, effective July 3, established posted prices for crude oil in the new Mountain View Field, the details of which will be found in a paragraph following the California price table on Page 30.

Group 3 Outlook Better as East Texas Improves

(Continued from Page 24)

before. The buying was said to be by major domestic refiners and by jobbers. Actual scarcity of material was reported in some instances and indications pointed to a continuance of the buoyant market, with still further increases in price.

The inflow of inquiries on 38-40 prime white distillate reported last week crystallized into orders, with the result that quotations were an eighth cent higher. Difficulty was reported in finding material to fill some orders, and still higher prices seemed likely. This product is being bought in the northern tier of states to be stored for use as a burner oil next fall and winter. One New York distributor alone handled 42,000,000 gallons of burner oil last season, indicating how the market for this product has widened in recent years. Some refiners, instead of selling their burner oils in the present active market, are holding them to apply on contracts for fall and winter delivery, fearing that unless they do this they may find themselves hard pressed to meet their contracts, for they recognize that their allocations may be reduced.

Although kerosene prices were unchanged the demand was lifeless. The demand for bright and steam refined stocks was softening and lower prices, in sympathy with the recent reductions in the Pennsylvania and East Coast areas, seemed probable. Neutrals were reported fairly steady.

MEXICAN OIL DECREE

A Mexican presidential decree adds petroleum and derivatives to the category of "basic necessities," which, according to the federal constitution, can be placed under direct federal control.

NEWS FOR SALES DEPARTMENTS

Marketing Committee Revises Code Discounts

The Marketing Committee "D" of the Petroleum Administrative Board announced July 11 and 12, certain changes in the oil marketing code, applying to Regions No. 1 and No. 3. The committee recommended the following exceptions for Region No. 1, under Article V, Rule 3, Paragraph 7: the insertion of the following in place of Clause (c):

"(c) That no guarantee of a fixed or top price over a period be made except as heretofore provided; and also except:

"1. Range oil, Diesel fuel and domestic fuel oils (numbers one, two, three and four, as defined by Commercial Standards in effect at the time contract is made) may be sold with a top price not lower than 1 cent per gallon more than the posted price without discount on the date contract is made.

"2. Industrial fuel oils (numbers five and six as defined by Commercial Standards in effect at the time contract is made) may be sold with a top price not lower than 1 cent per gallon more than the posted price without discount on the date contract is made."

The following exceptions were made for Region No. 3, under Article V, Rule 3, Paragraph 7; the insertion of the following in place of Clause (c):

"(c) That no guarantee of a fixed or top price over a period be made except as heretofore provided and also execpt:

"1. Range oil, Diesel fuel and domestic fuel oils (numbers one, two and three, as defined by Commercial Standards in effect at the time contract is made) may be sold with a top price not lower than 1½ cents per gallon more than the posted price without discount on the date contract is made except as hereinafter provided in the State of Ohio and the metropolitan areas of Chicago, Ill.; Detroit, Mich.; St. Louis, Mo., and Kansas City, Mo.

"2. Industrial fuel oils (numbers four, five and six as defined by Commercial Standards in effect at the time contract is made) may be sold with a top price not lower than 1 cent per gallon more than the posted price without discount on the date contract is made, except as hereinafter provided in the State of Ohio and the metropolitan areas of Chicago, Ill.; Detroit, Mich.; St. Louis, Mo., and Kansas City, Mo.

"3. In the State of Ohio and the metropolitan areas of Chicago, Ill.; Detroit, Mich.; St. Louis, Mo., and Kansas City, Mo., in order to meet the severe competition of other fuels, range oil, Diesel fuel and domestic oils (numbers one, two, three and four, as defined by Commercial Standards in effect at the time contract is made) may be sold with a top price not lower than 1 cent per gallon more than the posted price without discount on the date contract is made.

"4. In the State of Ohio and the metropolitan areas of Chicago, Ill.; Detroit, Mich.; St. Louis, Mo., and Kansas City, Mo., in order to meet the severe competition of other fuels, industrial fuel oils (numbers five and six, as defined by Commercial Standards in effect at the time contract is made) may be sold with a top price not lower than one-half cent per gallon more than the posted price without discount on the date contract is made."

RECONDITION GERMAN TANKER

PORT COLBORNE, Ontario, July 14.—The German tanker "Wilhelmine," grounded off Morgan's Point, was recently offered at auction but failed to bring satisfactory bids. The tanker will be floated and taken to Kingston drydock for examination and possible repair.

NAVY AWARDS CONTRACT

For the fourth year Associated Oil Co. has been awarded the contract to supply the United States Navy with its lubricating oil requirements for the Pacific fleet, it was announced today by P. E. Allan, domestic sales manager of the company.

The new contract covers approximately 1,200,000 gallons of lubricating oil for the Pacific fleet, and also includes the bulk of the requirements for Federal activities in California, Oregon, Washington, Idaho, Nevada and Arizona. The contract is for the fiscal year which started July 1, 1934.

In addition to the award, the company obtained Navy contracts to supply 750,000 gallons of motor gasoline at Honolulu and 400,000 gallons of aviation gasoline for the Pacific fleet and Pacific Coast air units during the next three months.

SOCONY IN NEW JERSEY

NEW YORK, July 14.—The Socony-Vacuum Oil Co., Inc., is completing plans to expand the distributing end of its business into New Jersey, according to trade reports here. The plan calls for both company-owned facilities and dealer accounts. The action, it is said, is being taken due to a demand for its products coming from consumers who are accustomed to use them in the adjoining State of New York, where Socony is the largest distributor.

It is pointed out locally that this action means a further overlapping of the former and present Standard units in their marketing operations. New Jersey is part of the Atlantic Seaboard marketing territory in which for many years the Standard of New Jersey was the exclusive marketing unit among the Standard companies. The Standard of New Jersey, through its subsidiary, the Colonial-Beacon Oil Co., is now a large distributor in New York and New England states where for many years the Standard of New York was the only Standard marketing organization.

Higher Prices Follow Toronto Gasoline War

Following intermittent gasoline price wars in some sections of Toronto, independent dealers have raised their prices to 15 cents and 15¾ cents. To these prices is added the Ontario gasoline tax of 6 cents a gallon. It is anticipated that the higher prices will be followed by the appearance of new gasolines with some difference in octane rating.

In reference to allegations of dodging of the provincial gasoline tax, officials of the provincial highways department state that they collect the gasoline tax from the refiner or importer. Not only are all these vendors under agreement but they are bonded and must report each month's sales on the tenth of the following month.

For two years it has been impossible for any company to go broke owing the government for several months' collection. The prompt payment stipulation was designed to meet this condition; and supervision will be even stricter under the Gasoline Handling Act passed at the last session of the legislature, under which every importer of gasoline must make a report whether under agreement with the government or not.

There is a check every three months of the accounts of the manufacturer or importer, and any discrepancies would speedily become apparent. As gasoline is quite volatile in hot weather some loss may be expected. The major oil companies allow their service stations one-half of one per cent. A dealer with a storage tank where the turnover is not so fast may have a larger loss; but anything over 2 per cent is investigated.

Mixtures of gasoline and kerosene or of distillate and casinghead gasoline would be treated as gasoline for tax purposes.

OLD DUTCH IMPROVEMENTS

Old Dutch Refining Co. started operations this week with new equipment recently installed to replace parts of its $500,000 modern skimming plant erected here about five years ago.

The Texas Company Builds Luminous Service Station

Built of opal glass and decorated with red and green neon lights, this service station is so constructed that it can be dismantled and reassembled on another site. The tower represents the Fire Chief's helmet

NRA VIOLATION UPHELD

BALTIMORE, Md., July 14.—Efforts of NRA to prevent gasoline dealers from giving away premiums where their business is conducted within a state are an infringement of the individual rghts of the dealers, says Federal Judge W. Calvin Chestnut. NRA compliance officials found the practice in service stations in three towns in Maryland and Pennsylvania and refusal to discontinue it caused the court action and ruling.

Canadian Motor Increase Aids Petroleum Imports

OTTAWA, Canada, July 14.—A recent survey of the Canadian gasoline situation indicates that revenue from gasoline taxes and motor vehicle registrations will be higher this year than in 1933 when funds obtained from these sources accounted for approximately 30 per cent of the total provincial revenues.

Petroleum imports into Canada are running well ahead of 1933, the total for the first four months of 1934 being 30 per cent greater. Automobile production in Canada in the same period is double that of the 1933 period, and reports from leading Canadian cities show a large increase in sales of both new and used cars.

Gasoline sales in the first two months of the year were restricted by extremely severe winter weather, returns showing a total slightly blow the 1933 figures. Since then the gasoline companies have reported a marked pick-up in business.

Revenue from motor vehicle registrations and gasoline sales in Canada in 1933 amounted to $46,978,782, a decline of 2.5 per cent from the 1932 total. Of the 1933 total, registrations accounted for $20,511,017 and gasoline tax $26,467,765. Motor vehicle registrations numbered 1,082,057, nearly 3 per cent below the previous year. Passenger car and truck licenses both declined, while buses and motorcycles increased. Registrations were lower in every province, with Saskatchewan, New Brunswick and Manitoba showing the greatest declines.

Only one change in the gasoline tax was made in 1933, Alberta increasing the tax from 5 to 6 cents on April 1 of that year. This accounted for the increased revenue in Alberta, actual consumption being reduced from 31,000,000 to about 29,000,000 gallons. Revenue in New Brunswick, Prince Edward Island and Manitoba increased without any change in the gallonage tax.

Comparative figures for the various provinces for the past two years are as follows:

MOTOR VEHICLE REGISTRATIONS

	1933	1933
Prince Edward Island	$ 95,282	$ 123,456
Nova Scotia	1,055,940	1,106,535
New Brunswick	758,397	835,866
Quebec	5,091,907	6,221,201
Ontario	7,640,765	7,589,489
Manitoba	883,236	964,790
Saskatchewan	1,480,066	1,516,087
Alberta	1,609,741	1,783,627
British Columbia	1,893,258	1,978,528
Yukon	2,425	2,432

GASOLINE TAX

	1933	1934
Prince Edward Island	$ 166,831	$ 134,398
Nova Scotia	933,571	957,781
New Brunswick	865,790	782,361
Quebec	4,952,764	5,250,172
Ontario	12,852,577	13,510,785
Manitoba	1,643,600	1,514,260
Saskatchewan	1,289,939	1,528,951
Alberta	1,739,240	1,551,227
British Columbia	2,023,403	2,053,511

INTERPRET CODE RULE

Marketing Committee "D" of the petroleum marketing code July 11 interpreted Article 5, Rule 7, as follows: "That the ordinary bracket and price signs are considered as advertising signs and not equipment, and therefore the loaning of same to dealers is not in violation of this rule."

Better Tone Pervades Chicago Markets as Gasoline Prices Show Firmness

By SPECIAL CORRESPONDENT

CHICAGO, July 16. — Better feeling pervades the petroleum markets here generally, as a result of moderate strengthening in the tank car gasoline price structure the last few days. The opening of the week found cheerfulness carrying over and more predictions for further improvement in the current week.

Low octane motor gasoline had strengthened to a point where it was within striking distance of 4 cents. Jobbers, while rather unconvinced as to the general outlook for improvement, were hedging by forwarding large numbers of shipping instructions against their contracts. Refinery shipments were running at a good rate. Offers of gasoline to jobbers by refiners and carlot marketers had virtually disappeared except at considerably higher prices. Moreover, those offering material were asking for prompt shipping instructions.

Better Retail Prices

Irregular tank wagon and service station markets have operated as an obstacle in the way of general improvement in oil markets, but late reports say these are gradually being adjusted in some sections, notably in Iowa. The trade hears that a blanket wagon and retail price advance is near. Jobbers do not feel like buying much additional material in the spot market with their home markets demoralized. It is estimated that, for the Middle West generally, retail gasoline prices are running perhaps 1 cent below normal levels. This is the case in metropolitan Chicago. Conditions in this retail market show little basic change. The independent group of station sellers mostly are selling 1 cent below major companies, and the majors in line with the recently announced plan for a 1-cent differential, are not now trying to meet this reduction.

Consumption trends are mixed, judging from current reports. Some major companies appear hard put to it to turn in a gallonage record comparing with a year ago, although in April and May they were running ahead of 1933. Some other sellers report their sales quite good in comparison with any previous period. Sales of regular gasoline, moreover, seem to be fully holding their own respective position in total sales, compared with earlier periods.

Natural Gasoline

Recent firming of the asking price for various key grades of natural gasoline is hailed here as a good barometer of better conditions at hand, although it is admitted that comparatively little natural is moving. Blending at present, so far as jobbers are concerned, is at a rather low ebb. Attention is being paid by trade leaders here to the possibilities of the plan for major company buying of natural to stabilize the market. Moreover, refiners in other sections than East Texas are asking for some concerted buying to relieve them. Notably this is true of North and Central Texas, where some little gasoline recently has accumulated.

Fuels

The general industrial situation such as would normally affect demand for fuels, is still somewhat obscure. Some authorities look for continued slackness for the next six weeks, to be followed by a sharp pickup in early September. Meanwhile, prices on low grade fuels are steady, while movement is rather limited. However, prices are reasonably firm. The high-grade fuels remain among the firmest products in the list. Industrial gas oil is slow and little changed.

Lubricants

Lubricants are soft and show a slightly backward tendency. Buying has not picked up following the recent easing. Both the compounders and jobbers are now slow buyers and the price structure on bright stocks, etc., seems soft.

Kerosene

While the gasoline season is at its height, and the gasoline market is better, a shade better tone is noted in other products, such as high grade burning oils. Kerosene, while not yet much changed in price, is firmer and not so freely available.

Crude Oil Prices

(Continued from Page 27)

Effective September 29 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.96
Iles, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.30
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 9, 1933)	
See Stanolind Mid-Continent price schedule	
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Dec. 15, 1932)	.45
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Dutton Creek (July 8, 1933)	See Mid-Continent gravity prices
Lance Creek (Dec. 16, 1932)	.92
Poison Spider (Mar. 5, 1931)	.70
Hudson (June 2, 1931)	.65
Lander (Mar. 5, 1931)	.40
Rex Lake (Feb. 22, 1930)	1.10
Osage	1.08
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera	1.15
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.70

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos-Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.01
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Mar. 17, 1934)	1.01
Pleasant Hill, La. (Mar. 17, 1934)	1.01
Zwolle, La. (Mar. 17, 1934)	1.01
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.01
Stephens, Ark. Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urania posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co; Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective May 1, 1934)

Bradford, Pa.	$2.55
Allegany, N. Y.	2.55

SOUTH PENN OIL CO.
(Effective May 1, 1934)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.55
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.32
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.17
Pennsylvania Grade Oil in Buckeye Pipe Line lines	2.07
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.32

PENNZOIL CO.
(Effective May 1, 1934)

Pennsylvania Grade Oil in National Transit Lines:	
Group A	$2.47
Includes Cochran, Franklin, Hamilton and Doolittle districts.	
Group B	2.46
Includes Titusville district.	
Group C	2.44
Includes Turkey and Tidioute districts.	
Group D	2.44
Includes Bear Creek and Porkey districts.	
Group E	2.43
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipper, Bredin, McJunkin, Jameson Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts.	
Price depends on length of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective May 1, 1934)

Cabin Creek, W. Va.	$2.17
Bradford Hollow, W. Va.	2.17
Kelly Creek, W. Va.	2.17

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	$1.08
Midland, Mich. (Sept. 30, 1933)*	1.02
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.23
Hart County, Ky. (Oct. 1, 1933)	1.18

*Posted by Pure Oil Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted price. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Hart County, Kentucky, crude purchased by Stoll Refining Co. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear Naphtha	$2.55
Discolored naphtha	2.31
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

Mexico

Panuco*	$0.94

*F.o.b. ship, based on May transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified.) (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.65	.72	.73	.69	.73	....	.69	.67	.68	.65	....	.65	....	....	....	.65
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	....	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1 04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	....	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.02	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1 02	.97	.94	....	1 02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1 09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1 15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1 18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 3, 1934, the following are the prices of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cen s; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 63 cents; 24-24.9, 66 cents; 25-25.9, 69 cents; 26-26.9, 72 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19-19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—33-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35-35.9, 99 cents; 36-36.9, $1.02; 37-37.9, $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cents added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon and Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Late Fields

OKLAHOMA

Late report on the well of Delaney and others (Loual Drilling Co.) in Section 25-2-6, Pontotoc County, showed that it flowed 367 bbls. on Sunday and 324 bbls. on Monday, while the well of Mid-Continent Petroleum Corp. and Jack Shaffer, Inc., Section 11-17-1w, Logan County, flowed 205 bbls. on Monday. Mid-Kansas Oil & Gas Co.'s No. 1, SW cor. Section 32-14-3w, Oklahoma County, which was completed November 5, 1930, with an initial production of 900 bbls., and which was shut in most of the time since, was opened up Monday and made 231 bbls. Olympic Oil Co.'s No. 1, C SE NW NE Section 12-9-8, Hughes County, was opened and it flowed 63 bbls. of oil in five hours from Cromwell sand at 3,432-78 feet and then averaged 14 bbls. per hour for seven hours. It is a 40,000,000-foot gas well. The oil has a gravity of 46.3 degrees and 60° F.

The Stanolind Pipe Line Co.'s extension from the Lucien Pool to the new Polo Pool, both in Noble County, was being tested this week and the trade can soon get a good line on the Texas Co.'s No. 1 Voss in Section 28-22-2w. It made 919 bbls. in a recent 24-hour test.

KANSAS

Tom Palmer's No. 1, C SE SE SW Section 19-18-2w, McPherson County, Kansas, had Kansas City lime at 2,282 feet, Siliceous lime at 3,305 feet, total depth 3,426 feet, with no showing. It was plugged back to 2,310 feet and acidized. When tested it pumped 46 bbls. in one hour and later it flowed 50 bbls. in one hour.

ORDER TWO INVESTIGATIONS

WASHINGTON, D. C., July 17.—An order has been issued by Administrator Ickes requiring natural gasoline manufacturers to make detailed monthly reports to the Bureau of Mines covering production, inventories, sales, etc., with a view to determine exact economic influence on petroleum industry of this product.

Also a public hearing to open an investigation into prices being charged for fuel and heating oils was ordered today by Administrator Ickes. Hearings will start on July 30 and will last about three days. The Consumers Advisory Board of the NRA has been invited to assist the Petroleum Advisory Board in these investigations. Code authorities of other industries affected by price increases in fuel oil will be invited to present their views. The P. and C. committee will present extensive brief in behalf of the industry.

BURNER MANUFACTURERS MEET

CHICAGO, July 16.—Further progress was reported on plans made for a co-operative promotion campaign for oil heating. The meetings here the past week were attended by representatives of burner manufacturers, burner dealers and oil companies. The sessions included the regular quarterly meeting of the board of directors of the American Oil Burner Association. Other questions considered were sales methods of competitive fuels, operating under the oil burner code and the oil code and closer co-operation between oil companies and oil burner interests.

STUDY AUTO PROGRESS

Average power output of the automobile engine has been increased 88 per cent, according to C. D. Hawley and Earl Bartholomew of the Ethyl Gasoline Corp. The horsepower of the smaller, and by far the most numerous, cars is now two to four and one-half times the 1925 figures.

Increases in power, it is pointed out, must necessarily come from increases in one or more of the following: Displacement, speed, brake mean effective pressure.

Opportunity Offered for Exploitation in Wyandot and Marion Counties, O.

By NOBLE L. WOOD
Geologist, Marion, Ohio

While the greater part of central and northwestern Ohio has been prospected, there remains a large section to be exploited and the inducements include good roads, small expense for casing, easy drilling, a price of 18 cents per 1,000 feet for gas, and $1.30 for oil. The oil producers have staying quality as attested by wells which have continued as commercial operations for the past 35 years.

In this article it is proposed to outline the geology and development of a section in Wyandot and Marion Counties.

The Tymochtee slate, a zone in the Waterlime or Monroe formation, outcrops in the bed of the Sandusky River at an elevation of 800 feet above sea level, and it was in the eastern part of Sandusky that a location was made in 1886. The top of the Trenton was encountered at 1,318 feet or subsea level of 490 feet, and while it was anticipated that the formation would prove productive of oil or gas, the well was completed as a duster after drilling 472 feet in the Trenton and Magnesium limestone. Two wells were then located at the western edge of Sandusky, one reaching the Trenton at 1,340 feet, and the other at 1,347 feet. These also proved dry.

A well drilled at Carey, 15 miles northwest of Sandusky, encountered the Trenton at a subsea level of 515 feet, with a dip to the northwest. An outcrop of the Waterlime in the Sandusky River in SE SW Section 21, indicated a steep dip to the northeast, and a well drilled just off of this outcrop substantiated the indication that the Trenton would be encountered with a steep dip to the northeast. Slightly more than 2 miles east of Sandusky is found the contact of the Waterlime and the Corniferous limestone, another indication that the Trenton would be encountered with a pitch to the east. Recent drilling has proven the correctness of the assumption that Upper Sandusky is situated at the summit of a dome in the Waterlime, and that in most respects the Trenton is conformable with the outcrop.

The question has often been asked why the wells drilled on top of this structure, favorable otherwise to an accumulation of both oil and gas, were dry. In the early days the first locations were made at or near the summit of the domes and terraces, causing considerable confusion and the abandonment of really favorable territory. Prospecting in this region has demonstrated that it is better to locate the well down off the top of the dome or terrace, as the Trenton seems to be more open and better situated for the retention and accumulation of oil or gas. However, this does not apply to outliners. The domes in central and northwestern Ohio are few, with a number of outliners with miles of extensions.

Predominant Feature

The predominant structural feature of the region is the arrested anticlines, or terrace condition of the Trenton, extending over a large area as proven by the production west and northwest of Lima, some 80 miles in extent. Also, the Clinton formation which extends 90 miles in length by 12 miles in width.

In the spring of 1930 the writer urged the drilling of a well in the S half Section 28, Crane Township, which after a shot proved to be a light commercial gas well. A second well was drilled a year later and gauged 1,400,000 feet. In the summer of 1932 a well was drilled in the bend of the Sandusky in the W half Section 28, and came in as a natural flowing oil producer with initial of 500 bbls. daily from a subsea level of 502 feet. These developments stimulated drilling and in the fall of 1932 a gas line was connected with the Ohio Fuel Gas Co.'s trunk.

Northeast, east and southeast in Crane Township is encountered the contact between the Waterlime or Monroe and the Corniferous limestone with a thin bed of Oriskany sandstone which weathers to rusty yellow sand spots. This condition prevails in places along this contact, and when observed, indicates to some extent the erratic trend of this contact.

About 15 years ago the Sun Oil Co. was attracted to the country some 2 or 3 miles east of Upper Sandusky, and drilled a well in the SW cor. NW Section 34. The top of the Trenton was reached at a depth reported at 1,381 feet, and a subsea level of 524 feet. The well was a duster, and the territory was abandoned by the Sun company. This test was like a number of others drilled in the then wildcat territory. The Trenton at that particular spot was tight, and the mistake was in not drilling another well on the lease as it now has five commercial producers.

The contact enters the township from the south in about the west 80 acres of SW Section 3. Then northeast to NW Section 3, on to NW SW Section 34, northeast to a little east of center line of Section 34, turning northwest to a well drilled in NE NW Section 34, which has a subsea level of approximately 558 feet, then extends on northwest through the SW SW Section 27, on northeast and leaves the township in E half Section 2. East of this contact there appears to be little encouragement for further prospecting. Two wells drilled in the southeastern part of the township in Section 35 were dry. At Nevada the Trenton drops to 830 feet below sea level.

The contact mentioned above enters Pitt Township from the south in western part of Section 12, and extends east of Little Sandusky where it is seen in the bed of the Sandusky River in the W half of Section 25, with the Corniferous limestone exposed in a perpendicular position, and then north through the E half of Section 23, and W half of Section 14, northwest to about the center line of Section 10, and on north into Crane Township.

A well drilled three years ago in NW Section 23, found the top of the Trenton at 1,449 feet, with a surface elevation of 850 feet. This well had a good show of both oil and gas but was abandoned without a shot. A well recently completed in SE SW Section 15, encountered the top of the Trenton at 1,416 feet, or subsea level of 521 feet, indicating a raise in the Trenton subsea level of about 77 feet from the well in NW Section 23. As the natural dip of the formation is east-southeast, and less than 35 feet to the mile, there can be little doubt now that this raise of the Trenton indicates a structural condition favorable to an accumulation of both oil and gas. This may be another outliner elongated at the time of the upper Sandusky uplift. The rock pressure and considerable show of oil in the well recently completed on the T. M. Bowman farm may result in the establishment of another pool of commercial value.

Marion County

Marion is situated at the summit of another dome in the Trenton limestone. The rock strata are thrown into broad anticline folds. The axes of these folds have, in general, a northwesternly trend, and in addition, there has been an upwarp of the entire region. Here the bonebed of the Corniferous limestone lies 200 feet higher than at Columbus, and over 300 feet higher than at Sandusky. However, this structural indication is surprising in view of the fact that the top of the Trenton is encountered at Columbus at a subsea level of 1,178 feet, pointing to a pitch of 471 feet in 45 miles, and at Marion a well reached the Trenton at a subsea level which indicated a pitch of about 463 feet in relation to another well 7 miles east.

In Grand Township in the extreme northwestern corner of Marion County, the Niagaran limestone outcrops with a surface elevation of 924 feet. This would indicate a raise of the formation of some 400 feet. Farther to the northwest the Lost Dome is encountered at a subsea level of 270 feet. One well located on top of the Findlay break got the top of the Trenton at a subsea level of 312 feet.

It appears certain that the Marion Dome is situated on the southeast limb of a plunging anticline that ties up with the Findlay break. The Lost Dome south of Patterson in Hancock County is about 20 miles southeast of Findlay and the territory between this Lost Dome and Findlay has some large wells. The Marion Dome is about 25 miles southeast of the Lost Dome and it is assumed that there will be modifications of the dip of the Trenton between the Lost Dome and Marion. The modification of this dip has been demonstrated often in drilling in central and northwestern Ohio. It is reasonable to predict that this region will be tested with some assurance of production in commercial quantities.

The Oil Man's Calendar

August

24-27—Titusville, Pa., Drake Well Memorial Celebration.

September

9 — Wernersville, Pa., American Trade Association executives.

10-14 — Cleveland, Ohio, American Chemical Society.

11-12 — Louisville, Ky., Kentucky Petroleum Marketers Association, Brown Hotel (dates tentative).

12-14—Atlantic City, N. J., North American Gasoline Tax Conference, Claridge Hotel.

19-21 — Atlantic City, N. J., National Petroleum Association.

26-27 — Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

October

1-5—Cleveland, Ohio, National Safety Council, Cleveland, Statler, Carter and Hollenden Hotels.

9—Michigan Independent Petroleum Distributors Association, place to be named later.

12-13—American Institute of Mining Engineers, Petroleum Division, fall meeting, Tulsa, Mayo Hotel.

16-18—Big Four State Jobbers Association Convention, Kansas City, Mo.

29—American Gas Association Convention and Exhibition, Atlantic City, N. J.

November

5-9—Cleveland, Ohio, Automotive Service Industries Show, Cleveland Public Auditorium.

Los Angeles, Calif., American Association of Petroleum Geologists, Pacific section.

12-15—Dallas, Tex., annual meeting, A.P.I.

December

3-8—New York, National Exposition of Power and Mechanical Engineering, Grand Central Palace.

January

7—New York, Society of Automotive Engineers, annual dinner.

NEWS FOR PETROLEUM REFINERS

Refinery Board Revises July Gasoline Quotas

Seven decisions by the Refinery Board of Review on appeals which the board heard at its last meeting may have been rendered. Two more decisions will be rendered shortly. The basis for some of the decisions follow.

The Texas Co. entered an appeal from the decision of the district allocating agency for refining district No. 5-B, fixing the gasoline production quota for the month of July. An increase of 146,206 bbls. was asked, but the appeal was denied. The basis of the request for an increase of gasoline production was that the allocation for district No. 5-B for the month of July was too low, and that the allocation to the Texas Co. was correspondingly low. The board held that they had no jurisdiction over the amount of allocation to a district, and that the appeal should be taken up with the proper agency and if an increase is granted to the district the Texas Co. must be given its fair and proportionate share of any such increase.

Appeals by the Standard Oil Co. of Ohio were filed. One is an appeal from the decision of the allocator for refining district No. 3, the other from a decision by the district allocating agency for district No. 2. An increase of 56,529 bbls. was asked in the district No. 3 case on the grounds that unless this increase was granted the inventory as July 31, 1934, would be below the necessary minimum. The board, however, held that in its opinion working and processing stocks of the company are excessive, but if no increase was granted the stocks on July 31 would be inadequate for shipping demands. An increase was therefore granted amounting to 20,000 bbls.

The appeal from the decision of the allocating agency in district No. 2 was based on the same grounds, namely, that the stock position would be too low. An increase of 34,000 bbls. was asked, but the board considered an increase of 20,000 bbls. would adequately cover the situation. An appeal filed by the Pure Oil Co. from a decision of the allocating agency in district No. 2 was allowed upon a showing that at the end of July only four days' supply would be on hand. The amount of increase granted was 15,000 bbls.

An appeal was entered by the Texas Co. from the decision of the district allocating agency for refining district No. 3, fixing the gasoline production quota for the month of July, 1934. The appellant asks this board to fix a quota of 614,137 bbls. of gasoline instead of 537,402 bbls. as fixed by the board. The appeal was denied on grounds of the overproduction of the Texas Co.'s quota in June and its excess of gasoline stocked at present.

An appeal by the Pure Oil Co. was made in district No. 5-B for an increase in its quota of 29,800 bbls. of gasoline to bring the total monthly production to 420,000 bbls. The board of review judged the appeal as reasonable and justified and requested the allocating agency to make the increase granted on the quota of the district. The basis of the decision was the shortage which the Pure Oil Co. would face at the end of the month which would interfere with the refinery operation.

The East Texas Refining Co. filed an appeal from the decision of the district allocator in refining district No. 5-A, asking for a quota increase of 59,764 bbls. of gasoline, bringing the month's quota up to 120,000 bbls. The appellant had underproduced or overproduced its quota in the past by great margins. In the months of underproduction the appellant did not report its production plans to the district allocator so as to give other companies the much needed increase. The company was also found to have sufficient stock on hand to last 27 days. On these grounds, the increase was denied.

Gasoline Tax Funds Go to Union Depot Project

Out of the $1,700,000 received by Los Angeles from the state gasoline fund, $1,000,000 will go to build a union depot. The remainder is for street maintenance. The original request was for $1,250,000 for the street maintenance and $1,000,000 for the depot. Street maintenance, which is the rightful end of gasoline taxes was pared, while the other appropriation was left untouched. The funds were drained further into the relief of special acquisition and improvement districts. The latter amount is $1,200,000. These receipts are part of a $6,000,000 diversion from the gasoline tax income to Los Angeles.

NAPHTHA STATIONS BANNED

CALGARY, Alberta, July 14.—The legislative committee of the city council has banned further permits for construction of stations for the sale of Turner Valley naphtha, pending thorough investigation by the city engineer's department. Permits for the construction of naphtha "treating" plants are also withheld pending investigation. Action was taken following complaints of strong odors in areas where Turner Valley naphtha was sold.

E. A. LYON HAS RETIRED

After 32 years as head of the New York marketing offices of the Gulf Refining Co., E. A. Lyon announces his retirement and he will be succeeded by Waldo Emerson, formerly of the Tide Water and Vacuum Oil marketing divisions.

Mr. Lyon opened the New York offices of the Gulf when the company's export business was relatively unimportant. At that time the office personnel consisted of three people including Mr. Lyon. As he leaves the offices which he organized, he will be given well wishes from several hundred employes in the expanded offices.

50-CITY GASOLINE PRICE FOR JULY MOVES UPWARD

The average service station price of regular grade gasoline, exclusive of taxes, in 50 representative cities throughout the United States on July 1, 1934, was 14.06 cents per gallon, as compared with 14.01 cents on June 1, an advance of .05 cent. It compares with 13.66 cents on May 1, a rise of .4 cent above the May price.

The 50-city price on July 1, 1933, was 13.06 cents. The 1934 composite price thus represents a gain of exactly 1 cent over that of a year ago. The 13.06-cent average for July, 1933, was the lowest price touched in that month since the 50-city record was begun 10 years ago. The highest July price was that of 1926, when 22.22 cents was the average paid.

Service Stations Offer Water But No Gasoline

LOS ANGELES, Calif., July 14.—The maritime strike and sympathetic strike of other kindred labor unions has precipitated such a critical condition in the San Francisco Bay region that automotive transportation has been severely impeded and will be completely paralyzed as soon as consumers use the amount of gasoline remaining in their automobile tanks. Major companies are keeping their service stations open for the sale of tires and other automotive accessories but with station tanks dry have posted signs reading "No gasoline."

National guards numbering approximately 2,000 men were called out at 2:30 Monday morning and left immediately for San Francisco. San Luis Obispo National Guard numbering approximately same number went north Saturday night. This puts about 6,000 militiamen in Bay region. Refineries around San Francisco Bay will be closed in immediate future.

At strategic points throughout San Francisco a small number of service stations are being operated to take care of emergencies and an adequate supply of gasoline and oil maintained for the use of physicians and surgeons. The situation in the East Bay region comprising Oakland and other adjacent cities is not as critical as in San Francisco, but this area will without doubt be tied up just as effectively if the arbitration board is unable to settle the controversial issues within the next several days.

The movement of tank trucks from refineries in the San Francisco Bay region has practically stopped and marketers are moving gasoline from refineries to other unaffected consuming areas by tank cars. The plants affected are those of the Standard Oil Co. at Richmond, the Union Oil Co. plant at Oleum, the Associated's plant at Avon, and the Shell's Martinez refinery.

The Pacific Northwest, comprising Washington and Oregon and other adjoining territory, will be completely out of gasoline within the next week if the strike continues, as considerable difficulty is being experienced in moving supplies into that area. Consumption of gasoline and lubricating oil on the Pacific Coast will be substantially lower than expected and this adverse condition will prove extremely detrimental to marketers from a financial standpoint because this is the season of highest demand and also because of the decision to keep their service stations in operation despite the fact that they have no gasoline to sell. Automobile associations have advised members not to go north of San Jose or Tracy, due to inability to secure adequate supplies of gasoline beyond these points and also because of a probable food shortage and strike of cooks and waiters.

START NEW MICHIGAN PLANT

The Mid-West Refineries, Inc., of Alma started operation of their new 2,000-bbl. plant in Central Michigan last week. The plant is expected to be in full operation this week with crude being transported from the big Porter Township, Midland County, pool in tank cars pending completion of a new 10-mile pipe line.

EXTRACT OIL FROM COAL

The first of a series of plants to extract oil from small coal or slack in South Wales is being planned by the National Coke & Oil Co., Ltd. The process enables a yield of 20 gallons of oil from one ton of small coal.

SINCLAIR FILES TWO SUITS

The Sinclair Refining Co. has filed suits against the Cosden Oil Corp. and the East Texas Refining Co., charging infringement of patents Nos. 1,365,604, 1,632,011, 1,740,691 and 1,686,093, because of operation of the so-called "Donnelly stills." Cracking stills of the general character of those operated by the Cosden Oil Corp. and the East Texas Refining Co. have been quite widely used.

The suit against the Cosden Oil Corp. has been filed in Abilene, Tex., and the suit against the East Texas Refining Co. in Tyler, Tex.

WILL BUILD REFINERY

Henry Goodman and I. E. Goodman, formerly president and treasurer, respectively, of Keystone Oil Refining Co., Detroit, Mich., have just acquired a 43-acre farm at New Boston (Wayne County), located on the Huron River and Pere Marquette Railroad for which they are now developing the engineering details for the erection of a 2,000 to 3,000-bbl. skimming and topping plant.

The present plans call for ultimately projecting this into a cracking unit. Temporary engineering offices have been opened at 828 Farwell Building, Detroit. Plant is expected to be in operation on or before the first of the year.

SHIPMENT BY PANAMA CANAL

The following amount of oil passed through the Panama Canal during the month of May, 1934, as reported in the cargo declarations showing the movement, by directions, in the U. S. intercoastal trade and in the total traffic. The figures are for tons of 2,240 pounds.

	U.S. intercoast.		Total all trade routes includ. U.S. intercoast.	
	Atl. to Pac.	Pac. to Atl.	Atl. to Pac.	Pac. to Atl.
Oils, mineral—				
Crude	.....	.....	.....	138,040
Gas and fuel .	.....	203,893	21,252	234,212
Gasoline, benzine and naphtha	20	106,585	5,007	137,821
Kerosene	.....	16,149	15,420	21,599
Lubricating and greases	11,655	756	23,446	902

1933 TAX INCOME HIGHER

Despite the fact that the total amount of gasoline consumed in this country last year decreased from that of 1932, tax collections increased by more than one-fifth.

This is attributed to more rigid enforcement of the laws and more efficient methods of distribution by the oil companies.

In 1932 the total gasoline tax collected from Federal, state and local sources amounted to $580,000,000. In 1933 the grand total came to over $700,000,000.

"Several innovations in handling gasoline and oil to prevent the bootlegger from plying his trade have been inaugurated by the great oil companies, one of which is a protected and certified gasoline in which a 'secret detector' is used. In this way the public is assured that bootleg gasoline cannot be foisted upon it, if ordinary vigilance in accepting fuel only from certified pumps is taken. The selling of oil in sealed cans has proved another potent weapon against the bootlegger.

DISCOUNT CHANGE APPROVED

Secretary of the Interior Harold L. Ickes approved on July 9 the action of the marketing chairman for Region No. 2, in accordance with the provisions of the third paragraph of Section 1 of resolution approved by the petroleum administration of February 21, 1934, relating to Article 5, Rule 3, Paragraph 7, commercial discounts, in the establishment of single deliveries of 50 gallons in place of 100 gallons.

There Will Probably Be Queer Fish in Future Wells

(Continued from Page 18)

it was being drilled and sank into the mud until it could sink no farther. Many old cuttings have been removed from these wells that was mixed with the rotary mud.

Another queer type of material is often recovered. Nodules of shale and black lime and other more or less tough formations have been found in wells that have been made egg-shaped by wear as they were thrown up and settled down in the hole. The rounded shape of these pieces of rock indicate quite clearly that they have been tumbled around and all corners knocked off before they came to rest at the bottom of the hole.

Hunks of cement have been frequently recovered by bailing showing very clearly the character of this material after it has set at the bottom of a hole. It has a good appearance and at first glance looks like some kind of natural rock.

Large chunks of the Green sand, one of the lower Simpson producing formations, have been recovered and show very clearly the type of material making up this pay zone in the Oklahoma City Field. These pieces differ from cuttings or core samples in that they are much larger, one piece being about 9 inches long by 5 inches wide and 3 inches thick, and they are pieces broken directly from the formation rather than drilled out or otherwise removed.

After a sand tamped shot the river sand used for tamping is recovered by bailing and sometimes it is mixed with oil and hard to distinguish from the formation sand at first glance. Closer examination will quickly differentiate between formation sand and surface sand dumped into the hole for the tamping purposes. When loose sand is encountered using the suction bailer full chambers will be recovered each run and the hole cleaned quickly.

Exploring for foreign material at the bottom of deep wells is a fascinating but exacting kind of work. The Cavins bailer has been used to recover material from bridges and after a shot in the Denver Producing & Refining Co.'s No. 1 A-Dah-Noe at 9,986 feet in Caddo County, Oklahoma. The material recovered from this hole consisted of cement from the walls of the hole, pieces of shale, parts of the time bomb and pieces of the Risonite shell as well as some pieces of the producing sand.

Stocks Show Additional Weakness on East Coast

(Continued from Page 25)

of sellers here. The export kerosene market is holding although this product is also dull so far as new business is concerned. Export coastwise prices at the Gulf on crude oil and gas oil are also reported easier.

Aside from the changes previously noted in bright stocks and steam refined stocks, no important price changes were reported during the week in other products. Competition is widespread in crude scale wax and sales as low as 3½ cents have been reported. Despite this weakness in crude scale the larger manufacturers have not changed their quotations on the fully refined.

Report Shows Domestic Gasoline Demand Ahead

(Continued from Page 8)

in demand for crude oil on the basis of gasoline and the gain in motor fuel requirements up to June 1 had furnished outlets for approximately 200,000 bbls. daily over the same period in 1933.

Hot Oil Operations

In connection with these monthly summaries of the Bureau of Mines reports the question has been asked several times as to whether the government data include hot oil operations in the crude oil producing and refinery ends. While the bureau in gathering the statistical data may include some oil which would be classed as "hot" it is safe to state that the great bulk of this production is not accounted for either in the supply or demand divisions of the Government's report. This is particularly true of the "hot oil" operations of a large number of small refineries in East Texas which do not make reports to the Government or any other statistical agency. Due to this situation, it is possible, as statisticians in the industry have pointed out, that the government reports indicate a better statistical situation than actually exists.

ROCKY MOUNTAIN PRODUCTION

Estimated production of the Rocky Mountain fields for the week ending July 14, 1934, follows:

WYOMING	
Salt Creek	17,940
Big Muddy	1,820
Badger Basin	40
Byron	70
Black Mountain	600
Dallas Derby	600
Dutton Creek	60
Elk Basin	540
Ferris	40
Frannie	2,290
Garland	870
Grass Creek	1,160
Greybull	10
Hamilton Dome	950
Hudson	310
LaBarge	1,300
Lance Creek	390
Lost Soldier	1,190
Mule Creek	shut in
Midway	70
Notches	shut in
Oregon Basin	2,500
Osage	950
Pilot Butte	10
Rex Lake	shut in
Rock River	1,480
South Casper	650
Poison Spider	330
Teapot	30
Total Wyoming	36,200
MONTANA	
Buckley-Border	360
Cat Creek	600
Cut Bank	2,500
Dry Creek	shut in
Kevin-Sunburst	4,350
Lake Basin	40
Pondera	850
Total Montana	8,700
COLORADO	
Florence	250
Fort Collins and Wellington	510
Iles Dome	3,140
Moffat	500
Orchard	100
Rangely	90
Tow Creek	190
Total Colorado	3,780
NEW MEXICO	
Artesia	640
Cooper area	80
Empire area	0
Eunice area	2,100
Getty Pool	0
Hobbs	36,490
Hogback	200
Hospah	shut in
Jal	2,960
Lea area	2,000
Jackson	2,450
Maljamar	150
Rattlesnake	740
Table Mesa	80
Total New Mexico	47,890
Total Rocky Mountain region	96,570

DENIED BLUE EAGLE

CHICAGO, July 16.—Applications for the blue eagle code compliance emblem have been denied to 13 members of the Waggoner service station chain in Chicago, according to announcement by M. H. Johnstone, secretary of the Chicago city petroleum code committee and of the planning and coordination committee. The reason was alleged failure to comply with the code.

Federal Judge Barnes has set July 30 as date for a hearing on a petition for injunction against the Government, filed by attorneys for 28 operators of Waggoner stations. The petition asks that governmental agencies be restrained from proceeding against the petitioners with criminal or civil proceedings on the ground that "merciless prosecution" by the Government would ruin the operators.

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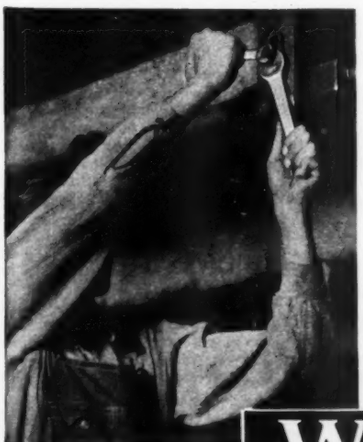
Wrenches, to some, may be just wrenches. But to the man who uses them in his day's work there are wrenches—and *wrenches.*

For fifty years Williams' Wrenches have been recognized for their superior design, their consistent accuracy and their long-time service. They have the *stuff* in them.

Forged from specially selected steels, there are no shortcuts in manufacture to hazard their quality. Every one bears Williams' guarantee. You buy Williams' Wrenches with the absolute assurance that you can buy none better.



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NATURAL GASOLINE MANUFACTURE

Surplus Natural Averted by Large Pacific Export

Large Pacific Coast shipments in May more than offset the decrease in refinery utilization of California natural gasoline, according to the California office of the Bureau of Mines. Production was virtually unchanged during May, amounting to 31,275 bbls. daily, as compared to 31,283 bbls. in April. Stocks decreased 271 bbls. daily, or a total of 8,413 bbls., and at the end of the month amounted to 2,465,346 bbls. The seasonal decrease in refinery utilization was 1,425 bbls. and brought the daily average to 25,844 bbls.

NATURAL GASOLINE PLANT OPERATIONS

Field—	Gas treated (M.C.F.)	Nat. gasoline produced (gallons)
San Joaquin Valley:		
Elk Hills	81,974	142,430
Kettleman Hills	8,117,002	10,949,287
Midway-Sunset	1,389,944	2,812,374
Mountain View	63,900	70,678
Miscellaneous	430,612	483,126
Coastal region:		
Elwood	256,995	421,517
Rincon	76,338	75,041
Santa Maria	163,979	428,526
Ventura Avenue	3,275,492	3,601,598
Miscellaneous	241,031	280,089
Los Angeles Basin:		
Coyote	489,566	925,569
Dominguez	687,877	1,334,906
Huntington Beach	2,483,014	3,311,974
Inglewood	109,561	136,762
Long Beach	2,244,896	6,709,718
Playa del Rey	202,123	635,622
Richfield	495,606	605,243
Rosecrans	462,655	562,667
Santa Fe Springs	3,272,921	5,457,617
Seal Beach	572,308	743,957
Torrance	108,221	233,721
Miscellaneous	256,031	797,297
Total (all fields)	25,481,946	40,719,729

DISTRIBUTION

(Gallons)

Stocks beginning of mo.	3,557,903	
Production during mo.	40,719,729	
Delivered to refineries		39,479,898
Delivered to jobbers, brokers or blenders		927,122
Blended at plants for production of motor fuel		3,419
Losses		93,516
Stocks end of month		3,773,677
Total	44,277,632	44,277,632
		Gallons
Liquefied pet. gas production		640,522
Motor fuel produced		6,979

SUPPLY AND DEMAND

(Barrels)

	Natural gasoline inc. liquefied petroleum gas	
	May	April
Supply		
Total production	31,767	31,840
Stock transfer (deliveries) receipts—net	(170)	(276)
Net total	31,597	31,564
Deduct refinery requirements:		
Run to stills	3,961	3,244
Blended	21,883	24,025
Total	25,844	27,269
Add refined output:		
Natural gasoline—net	75	229
Net refined production	75	229
Net current supply	5,828	4,524
Demand		
Domestic demand including bunkers	667	805
Shipments to Alaska and Hawaii	5	6
Rail and truck shipments to U. S. points outside Pacific Coast territory	8	4
Demand in domestic market area	680	815
Shipments: Pacific foreign inc. Canal Zone	2,924	436
Total market demand	3,614	1,251
Losses (gains) unaccounted for—net	2,485	1,973
Total current demand	6,099	3,224
Surplus or (deficit)	(271)	(1,300)

Natural Gasoline Production Is Doubled in East Texas This Year Over Last

East Texas, in spite of predictions to the contrary, has grown to share a considerable part of Texas production of natural gasoline. Although still a minor source as compared to the Panhandle, it showed the greatest percentage increase of any field in the United States. This increase in production is due to the operation of the new plants which have sprung up in the field. The gain has recently been foreseen.

While most of the other fields were producing with slight gains or losses over last month, East Texas increased its production 27 per cent. This brings the figure to 13,200,000 gallons for the first five months of 1934, or a gain of 97 per cent over the same period of last year. If this district holds the gain, or adds to it, it will bid fair to pass the output of such fields as Louisiana, Huntington Beach or Ventura Avenue by the end of the year. Its monthly figure is already greater than these.

The gain shown under the heading of rest of State of Texas is contrary to both the seasonal trend and the geographical tendency. It includes many old fields in which natural gasoline production is necessarily on the wane. The increase under this heading is due to the building of several plants on the Gulf Coast. This new activity, if continued, will necessitate the creation of the Gulf district in Texas.

The standstill in Panhandle may be interpreted as the cancellation of increased production under the sour gas law.

Stocks increased in May, despite the lowered price for natural gasoline. It was the direct result of the lessening demand in summer motor fuel. The largest quantity of storage is in the Texas Panhandle where the total was increased to 18,863,000 gallons. Only 13,055,000 gallons were in storage on the first of April. East Texas, without the storage facilities of the more established areas, holds 532,000 gallons, an increase of over 200,000 gallons for the month.

Total stocks in the United States on the first of April were 53,587,000 gallons, and at the close of the month, 63,708,000 gallons. The failure to curtail production becomes more alarming. Some decrease occurred but not enough to keep stock figures from increasing nearly 10,000,000 gallons over last month.

PRODUCTION AND DISTRIBUTION OF NATURAL GASOLINE

(Thousands of barrels of 42 gallons)

	May, 1934		April, 1934		Jan.-May,	Jan.-May,
	Total	Dly. av.	Total	Dly. av.	1934	1933
Production	2,907	94	2,926	98	14,671	13,640
Blended at refineries	1,690	55	1,941	65	9,553	8,925
Blended at plants east of California	29	1	26	1	120	42
Run through pipe lines in California	123	4	97	3	595	527
Jobbers, exports, etc.	521	17	257	9	1,810	2,118
Increase in all stocks	152	5	343	11	731	762
Losses	392	12	262	9	1,862	1,266
Total	2,907	94	2,926	98	14,671	13,640

PRODUCTION OF MOTOR FUEL

(Thousands of barrels of 42 gallons)

	May, 1934		April, 1934		Jan.-May,	Jan.-May,
	Total	Dly. av.	Total	Dly. av.	1934	1933
Refinery gasoline:						
Straightrun	18,282	589	17,496	583	84,850	77,200
Cracked	15,099	487	14,563	485	70,932	69,641
Natural gasoline:						
Production	2,907	94	2,926	98	14,671	13,640
Deduct losses	392	12	262	9	1,862	1,266
Benzol	172	5	152	5	745	465
Total motor fuel	36,068	1,163	34,875	1,162	169,336	159,680

PRODUCTION AND STOCKS BY FIELDS

(Thousands of gallons)

	Natural gasoline						Blended motor fuel May, 1934		
	Production				Stocks end of month				
	May, 1934	Apr., 1934	Jan.-May, 1934	Jan.-May, 1933	May, 1934	Apr., 1934	Natural gasoline used	Naphtha or other oils used	Stocks end of month
Appalachian	4,000	4,200	27,000	28,200	6,985	7,158	437	210	136
Ill., Ky., and Mich.	500	600	3,500	3,600	667	667	....	....	....
Oklahoma	28,700	30,500	151,000	140,000	24,193	20,750	22	37	29
Oklahoma City	8,200	9,500	44,600	31,700	7,036	5,812	....	....	....
Osage County	3,500	3,400	17,900	16,900	5,355	4,332	3	....	8
Seminole	6,700	7,200	36,000	38,500	4,631	3,904	2	....	....
Rest of State	10,200	10,400	52,500	52,900	7,171	6,702	17	37	21
Kansas	2,200	2,200	11,300	10,000	1,405	1,186	19	15	35
Texas	37,000	35,800	177,300	142,400	24,655	18,378	350	754	99
East Texas	3,300	2,600	13,200	6,700	532	303	312	705	57
North Texas	1,700	1,800	9,000	8,700	725	706	1	1	2
Panhandle	20,000	20,000	97,500	63,800	18,863	13,055	25	48	7
West Central	7,300	7,400	36,800	34,100	3,168	3,009	12	....	33
Rest of State	4,700	4,000	20,800	24,100	1,427	1,305	....	....	....
Louisiana	3,200	3,500	17,200	16,800	626	689	56	....	10
Arkansas	1,100	1,100	5,400	6,500	118	122	321	506	86
Rocky Mountain	4,700	4,900	23,700	23,100	1,345	1,169	8	12	3
California	40,700	39,400	190,800	262,500	8,774	8,558	....	....	....
Huntington Beach	3,300	3,000	15,000	7,300	....	....	....	....	....
Kettleman Hills	10,900	11,100	58,700	55,900	....	....	....	....	....
Long Beach	6,700	6,400	30,700	35,300	..	....	....	....	..
Santa Fe Springs	5,500	5,100	26,200	34,700	....	....	....	....	....
Ventura Avenue	3,600	3,400	18,200	16,600	....	....	....	....	....
Rest of State	10,700	10,400	51,000	52,700	....	....	....	..	....
Total	122,100	122,900	616,200	572,900	63,786	53,587	1,213	1,534	398
Daily average	3,940	4,100	4,080	3,780	....	....	39	49	....
Total (thousands of barrels)	2,907	2,926	14,671	13,640	1,517	1,276	29	37	9
Daily average	94	98	97	90	....	....	1	1	....

Ask Federal Aid to Curb Waste of Gas in Panhandle

AMARILLO, Tex., July 16.—Declaring that the gas wastage in the Panhandle is a national problem, with gas equal to the daily domestic consumption in the entire United States being wasted every 24 hours, "practically without restriction or regulation," the Panhandle Conservation Association today requested the congressional committee investigating oil conditions to include Amarillo in its Texas itinerary.

The request that the committee make a first hand study of the Panhandle gas situation was sent by Joe T. Sneed, Jr., president for the conservation association to Representative Cole, Maryland, chairman of the investigating committee, now at Houston.

The message follows:

"Panhandle Conservation Association urgently requests your committee to come to Amarillo and investigate the appalling waste of natural gas being permitted practically without restriction or regulation in the Panhandle oil and gas field. The wanton waste into the air of this important natural resource has been rapidly increasing until now it is approximately 1,000,000,000 feet daily or an amount equal to the daily domestic consumption of natural gas in the entire United States. According to past Railroad Commission estimates this waste is accelerating at the rate of over 100,000,000 feet daily each month.

"The Railroad Commission is now attempting to avoid responsibility and publicity by smothering detailed information on gas and oil production and wastage to both landowners and producers.

"One billion feet of gas daily is equivalent in heating value to over 200,000 bbls. of oil daily or 1,000 railroad car loads of soft coal.

"Comprising over 1,000,000 acres, the Panhandle is the largest gas field, and second largest oil field in the world. Uncontroverted sworn testimony of competent engineers reveals that this useless and reckless gas wastage will finally result in the complete loss underground of 400,000,000 to 500,000,000 bbls. of recoverable oil.

"This is a national problem. Texas, Oklahoma, Kansas, New Mexico, Colorado, Missouri, Nebraska, Iowa, South Dakota, Minnesota, Illinois and Indiana, through recently completed large natural gas lines get all or a portion of their natural gas supply from this great structure. Numerous other states through interconnected lines can and will be supplied from here. Texas of course secures a large portion of its supply from this field.

"As a common result of this terrific waste thousands of our land and royalty owners are being robbed of their royalty gas without any semblance of regulation or conservation. Natural gasoline production is not regulated in any way, therefore it is running rampant and making less effective oil and refining regulations.

"We have the anomaly of strict proration in this field to 56,000 bbls. of oil daily at the same time there is being needlessly and recklessly wasted daily into the air 1,000,000,000 feet of gas, the equivalent of over 200,000 bbls. of oil.

"On behalf of the members of this association I urge your acceptance of this invitation as we believe that your investigation at this time is vital to the oil and gas industry, as well as all the citizens of Texas."

PIPE LINE CONSTRUCTION

GULF COAST SURVEY

The possibility of a new trunk pipe line artery in the Gulf Coast district of Texas is seen in reports from San Antonio that right of way is being surveyed from the Keeran Pool of Victoria County to Ingleside on the ship channel at Corpus Christi.

Rumors are that Atlantic Pipe Line Co. or Gulf Pipe Line Co. will construct the line running from the Keeran Pool south through the McFadden, Greta and Refugio Pools.

Rumors also have it that a branch line will be run to the new Sinton and Angelita Pools in San Patricio County. The line would be about 75 miles long.

The new Vanderbilt Pool in Jackson County is about 8 miles northeast of the Keeran district and possibly would be included in the pipe line system, if one is built.

FOARD COUNTY LINE

The Texas Pipe Line Co. is surveying for 25 miles of 6-inch line to be laid from its wells in Section 36, Block L, S.P.R.R. Survey, on the western edge of Foard County, north to Section 209, W. &N.W. Survey near Acme where it will connect with the company's main line from the Panhandle to the Gulf. Two 55,000-bbl. tanks will be erected and a small pumping station installed at the latter place, the oil to be "batched" for transporting to the Gulf. This line will supplant the line now connecting with the Magnolia Pipe Line Co.'s line to the west. The Texas Co. has two good high gravity producers in this area and is now drilling the third test on its block surrounding the wells. A gasoline plant is also processing the wet gas from the wells, the casinghead gasoline being shipped out by tank car from loading rack several miles distant on the nearest railroad.

AUBURN LINE COMPLETED

SYRACUSE, N. Y., July 16.—The New York State Natural Gas Co. has completed 21.7 miles of 10-inch gas line which is a branch off the 20-inch Syracuse line, south of Onandago and which leads into Auburn, N. Y. Experienced pipe line engineers have characterized the going as the toughest in 13 states and are being congratulated on the excellent time made in spite of swamps, quicksand and water encountered, sometimes simultaneously.

Operations started on April 1. The line was laid under contract by Rich & Co. of Bradford, Pa., with Sylvester Rich in charge and with Adam Schreiber of New York State Natural Gas Co. supervising.

This line will carry natural gas from the Tioga and Hebron Fields to Auburn, N. Y. Skanateales is the largest city encountered on the route and at this writing it is impossible to state if this city will use the gas from the new line. At present, Skanateales does not even have the convenience of a manufactured gas service.

Jones & Laughlin seamless steel pipe with an outside diameter of 10¾ inches, weighing 28.035 pounds to the foot, A.P.I. standards, and in 40-foot lengths, was used.

Dresser couplings were used throughout the line and their ease of installation enabled the laying crew to reach a high point of performance in laying and joining 116 joints per day.

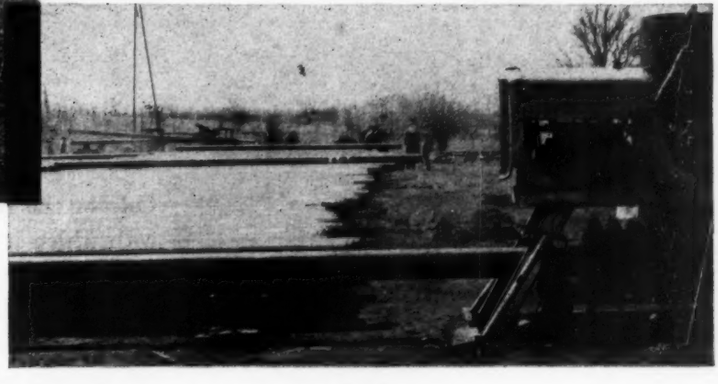
Approximately 150 men have been steadily employed on this project, but only 24 men have been used on the laying crew. This crew, with its record of 4,640 feet of pipe laid in one day, represents a highly efficient organization where team work is smoothly synchronized. The personnel of the crew is as follows: Eight wrenchers, one wrench inspector, two two-bolters, two tractors, one skid man, two entering men, one stabber, one swamper, one pipe foreman, two swabbers, one teamster and team, one follower man and one water boy.

Engineers in charge of the project state that the laying speed has been due largely to the fact that the couplings were easily and quickly installed and that the flexibility of the joints provided the necessary amount of deflection. The line was built to withstand pressures of 800 pounds per square inch, although operating pressures will be much lower.

Bolters at work

● LEFT: At a speed up to two miles per day (fast enough to avoid retarding any other operation), this W-K-M Model B Double-Head Pipe Cleaning Machine, on an 8-in. reconditioning job in Oklahoma, is providing a clean surface for protective coating at a cost of approximately 3c per foot.

● BELOW: The same machine, mounted on a stationary base, cleaning 8-in. pipe at an average rate of 8,000 feet per day, the total cost being approximately 2c per foot.



If you have

PIPE TO CLEAN

The new W-K-M Model B Double-Head Pipe Cleaning Machine will clean from 2″ to 14″ pipe. It may be used either as a travelling type machine on a made-up line (6″ diameter or greater), or as a stationary machine through which pipe is propelled automatically, as illustrated above. Cleaning costs are exceedingly low; one user reporting costs of 2c per foot on 8″ pipe, including handling, labor, upkeep, overhead and depreciation. If you have pipe to clean, either new or old, permit us to provide you with cost figures. They will be cheerfully furnished on request.

• the W-K-M Pipe Cleaning Machine offers the only thorough and economical method

CRUTCHER-ROLFS-CUMMINGS-INC.

Specializing in

PIPE LINE EQUIPMENT AND MATERIALS

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● Exclusive domestic representatives W-K-M Pipe Line Equipment ●

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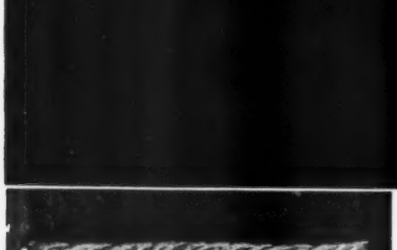

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The technique for welding Plykrome has been carefully worked out and proved in use. It requires no unusual equipment, nor does it involve any unusual hazards.

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Showings of Oil and Gas in Upton Ordovician; 67 Locations, 58 Completions in Wichita Falls

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., July 16.—The most important development in the West Texas district during the week was the reported showing of oil and gas in Gulf Production Co.'s No. 103 McElroy, an Ordovician wildcat test in Upton County. The report credits the test as having a showing of oil and gas in the lime from 10,581-10,631 feet. Although the report is unconfirmed, the company is preparing to run 7⅝-inch pipe to 10,300 feet and many are of the opinion the test has reached the Ordovician or found something interesting in the last section drilled. The hole has been caving. It is the deepest test ever drilled in the State, and is 746 feet short of the deepest ever drilled. The test is almost on the Crane-Upton County line in Section 197, Block F, C.C.S.D.&R.G.N.G. Survey.

Since the abandonment of Humble Oil & Refining Co.'s wildcat Ordovician test on the west side of the Permian Basin in Pecos County, search for Ordovician production has shifted to the east side of the basin, but the showing of the Gulf test will no doubt bring back much interest to the west side. It is estimated it will take two days to run the casing which will be the longest string ever run in the Texas and Mid-Continent fields.

The sixth location for an Ordovician test in the district was made during the week by Paul C. Teas, an independent operator of San Antonio. The test which is scheduled to start drilling early in September is on the east side of the basin and in the center of the NE SW Section 39, Block 5, T.W.&N.G. Survey, Sutton County. It is on a block of 6,500 acres and will be drilled on the land owned by Clarendon E. Mower of Rockford, Ill., and is scheduled to be drilled to 5,000 feet or deeper. Protection acreage around the test is owned by the Shell Petroleum Corp., Gulf Production Co., Indian Territory Illuminating Oil Co. and the Empire Gas & Fuel Co. This is the third week in succession the district has received a location for a test to be drilled in search of Ordovician production found only in the Big Lake Pool in Reagan County.

Ector County

C. J. Davidson and others' No. 1 Cummins, in northwestern part of Ector County which opened the sixth producing area in the county, was shot with 360 quarts from 4,180-4,430 feet and responded with a spray of about 4 bbls. of oil per hour, with gas estimated from 8,000,000 to 10,000,000 feet. It was thought the well would make a much better well after being shot and if production does not increase after it has been thoroughly cleaned out, acid will be used. It is in Section 10, Block 45, Township 1n, T.&P. Survey.

Landreth Production Co.'s No. 1 Scharbauer, 5 miles southeast, continues to check favorably, making it the most interesting test drilling in the county. During the week it was reported to have topped the white lime at 3,710 feet or 588 feet below sea level which makes it check 53 feet lower than Davidson's No. 1 Cummins and 240 feet higher than Penn-Devonian Oil Co.'s No. 1 Goodman, an old dry hole drilled about 3 miles southeast. Late in the week it was running 6⅝-inch casing with a total depth of 3,740 feet. Location is in Section 20, Block 44, Township 1n, T.&P. Survey.

York-Harper and others' No. 1 Bates in the same county but south of Broderick and Calvert's No. 1 E. F. Cowden's discovery well in Section 38, Block 44, Township 2s, T.&P. Survey, had not encountered any increase in oil while drilling below 4,092 feet. The first showing of oil was encountered last week at 3,977 feet and casing was set at 3,985 feet. It is only 20 feet lower than the discovery well, based on top of the gray lime and its chances of making the second producing well in the area are favorable.

Andrews County

The wildcat test of Humble Oil & Refining Co. on the Means farm in the north central part of Andrews County, was preparing to run 6-inch casing to 4,087 feet when the pipe hung at 4,000 feet and split when pressure was applied to loosen it. Cement was run above and below the split to seal off the gas estimated at 10,800,000 feet which was encountered at 2,957 feet. Late in the week it was preparing to start drilling at 4,095 feet and if the gas has not been sealed off, it is reported the test will be completed as a gas well and another test drilled nearby, using the gas from the first test as fuel for the second.

Crane County

Wahlenmaier Petroleum Corp.'s No. 1 Edwards, which opened a small producing area in Crane County a few weeks ago, was shot the second time with 200 quarts from 3,480-3,532 feet and swabbed 60 bbls. of oil the second day. However, production has declined to 10 bbls. per day. It is now cleaning out. It is in Section 12, Block B-23, P.S.L. Survey, east of the Waddell Pool.

Effective July 14, the Texas Railroad Commission issued an order increasing the allowable in northern and southern Ward County. Northern Ward County was increased from 3,500 to 5,000 bbls. and south Ward County from 5,800 to 6,800 bbls., bringing the total daily allowable for the West Texas district to 143,657 bbls.

Completions and Locations

There were 8 locations and 11 completions reported in the West Texas district during the week. Out of the eight locations, one was a wildcat in Winkler County, the others being in proven areas.

In the northeastern part of Winkler County, R. S. Mathews and others have made a location for a wildcat in Section 46, Block 73, P.S.L. Survey on the Evans land.

Mac T. Anderson's No. 1 T. N. McKenzie, 2½ miles south of the Taylor Link Pool, in Pecos County, has been completed for a 15-bbl. well from pay topped at 1,338-78 feet. It is bottomed at 1,378 feet and is in Section 1, Block 604. Illinois Oil Co., which recently entered into activities in the Yates Pool, has made a location near the producer.

Schleicher County

All hopes of developing commercial production from the Pennsylvanian horizon in John M. Cooper and others' No. 1 Bert Page in Schleicher County were abandoned the latter part of the week when it encountered more salt water from 5,628-32 feet, and the operators are to begin drilling to the Ordovician as soon as 5⅞-inch casing is run to 5,635 feet. The test is 9½ miles southeast of Eldorado in Section 40, Block L, G.H.&S.A. Survey. In the same country, but 12 miles north, Humble Oil & Refining Co. has spudded No. 1 Ike Honig, also an Ordovician test. It is in Section 38, Block M, G.H.&S.A. Survey.

In the northern Cowden area, in Ector County, Sun Oil Co. has made an interesting test on the Wight land in Section 2, Block 43, Township 1s, T.&P. Survey. It is about a mile south of the Cowden producers and will cause more drilling in this particular area, if a producer.

RANGER AND WICHITA FALLS

Regardless of the long continued drouth in the Wichita Falls district, operators continue to stake many locations and complete wells. There were 67 locations reported during the week with 58 tests completed. Archer County remains the most active area with 29 completions.

The most interesting feature this week was Pitzer and West's No. 1 T. J. Gardner picking up saturated lime unusually high at 3,820 feet and filling 1,000 feet with oil while drilling at 3,885 feet. It is drilling deeper at 4,087 feet and will be shot unless it makes an exceptionally good well. It is in the southwest corner of T.E.&L. Survey No. 614, 2 miles northwest of the James Pool, which has been somewhat disappointing in that the wells have been decreasing rapidly in production and the pool was not extended to cover as much area as anticipated.

Nash and Winfohr of Graham picked up a stray sand in their No. 12 Graham-Vick, in the southeast corner of the A. Hines Survey, Abstract 135, Young County, the sand being logged from 2,575-85 feet. It pumped 155 bbls. in 24 hours and will lead to considerably more drilling. It is east and west of other producers making oil from sand horizons found from 2,677-88 feet and 2,660-85 feet.

Cordova Union Oil Co. and others' No. 1 M. K. Graham, in the southwest quarter of B.B.B.&C. Survey, 2½ miles southeast of the Knox Pool and 3½ miles south and west of Texas Co.'s deep producer on the Rubenkoenig farm, Young County, picked up 8,000,000 feet of gas at 2,710 feet and may open another producing area.

Nancy Petroleum Corp. of Tulsa is moving in material for a 4,300-foot test on the Mrs. Burch lands in Section 477, T.E.&L. Survey, 6 miles northwest of Graham and 1 mile from production in Young County. The company has a block of around 3,000 acres.

Hickok Oil Corp., of Toledo, Ohio, which has gas producing wells and a gasoline plant near Eastland, is preparing to lay a gas distribution system in the town of Cisco, in which it has a franchise. Pipe has been unloaded. The company is also working for a franchise in the town of Eastland. Lone Star Gas Co. serves both towns at present.

Fain-McGaha Oil Corp. of Wichita Falls has secured a lease on the south 196 acres of Section 44, Block 18, H.&T.C. Survey, Foard County, and is to drill a 2,500-foot test in the northeast corner of the tract within 90 days. The acreage adjoins the small Thalia Pool on the southwest.

Sides and Shackelford of Eastland have taken a block of 1,200 acres centering in the G. S. Blount lands in the H. Millard Survey, Jones County, and will drill a 2,250-foot test. The land is 2 miles northwest and southeast of production in the regular Hawley pay.

Production in the Wichita Falls district for the week averaged 60,675 bbls.

Wildcat Operations in West Texas

Week Ending July 16

ANDREWS COUNTY

Fuhrman Pet. Co.'s No. 1-B Bonner, 1,320 ft. from N line and 1,320 ft. from E line of Sec. 25, Blk. A-43, P.S.L. Sur.
Cleaning out to 4,408 ft.; T.D. 4,493 ft.

Honolulu and Llano Oil Co.'s No. 1 J. E Parker, 1,320 ft. from S line and 1,470 ft. from W line of Sec. 7, Blk. A-44, P.S.L. Sur.
Drlg. 915 ft.

Humble Oil & Ref. Co.'s No. 1 B. S. Walker, 660 ft. from E line and 660 ft. from S line of Sec. 6, Blk. A-43, P.S.L. Sur.
Location.

Humble Oil & Ref. Co.'s No. 1 R. M. Means, 660 ft. from N and 660 ft. from E of Sec. 2, Blk. 2-35, P.S.L. Sur.
Prepare to start drlg.; T.D. 4,097 ft.

Humble Oil & Ref. Co.'s No. 1 Kuykendall, 1,920 ft. from S and E lines of Sec. 24, Blk. A-46, P.S.L. Sur.
Cleaning out; T.D. 4,511 ft.

BORDEN COUNTY

Continental Oil Co.'s No. 1 Johnson, 660 ft. from S line and 660 ft. from E line of Sec. 34, Blk. 32, Twp. 4n, T.&P. Sur.
Drlg. 1,150 ft.

BREWSTER COUNTY

Joiner-McIntyre's No. 1, 853 ft. from S, 2,390 ft. from E of Sec. 31, Blk. 352, W. M. Mitchell Sur.
S.D. 1,725 ft.

COKE COUNTY

Wm. Hooper's No. 1 Gaston, 240 ft. from S line and 654 ft. from W line of Joseph Sur. No. 11.
T.D. 2,550 ft.

CRANE COUNTY

Brandon et al's No. 1 J. Cowden, 330 ft. from N and 330 ft. from W line of Sec. 13, Blk. X, C.C.S.D.&R.G.N.G. Sur.
Drlg. 2,885 ft.

Gulf Prod. Co.'s No. 1 E. M. Snodgrass, 1,320 ft. from N and 1,320 ft. from W line of Sec. 1, Blk. B-25, P.S.L. Sur.
Drlg. 918 ft.

Wahlenmaier Pet. Corp.'s No. 1 W. P. Edwards, 330 ft. from N and 330 ft. from E of SW cor. of the NE of Sec. 12, Blk. B-23, P.S.L. Sur.
Shot.

CROCKETT COUNTY

J. D. Young's No. 1 Shannon, 330 ft. from W line, 330 ft. from N line of Sec. 35, Blk. 1, G.C.&S.F. Sur.
S.D. 2,635 ft.

CULBERSON COUNTY

Anderson-Pritchard Oil Corp.'s No. 1 Borders, 1,255 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
Spudded and S.D.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
S.D. 1,062 ft.

DAWSON COUNTY

Ray Albaugh et al's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 2,381 ft.

ECTOR COUNTY

Atlantic Oil & Prod. Co.'s No. 2 Holt, 660 ft. from N line and 1,980 ft. from E line of Sec. 19, Blk. A, P.S.L. Sur.
To straighten crooked hole; T.D. 1,180 ft.

Continental Oil Co.'s No. 2 O. B. Holt, 1,980 ft. from S line and 1,980 ft. from W line of Sec. 20, Blk. A, P.S.L. Sur.
Drlg. 2,402 ft.

C. J. Davidson et al's No. 1 Cole, 660 ft. from N line and 660 ft. from W line of Sec. 10, Blk. 45, Twp. 1n, T.&P. Sur.
Flowed 4 bbls. per hour after shot; T.D. 4,509 ft.

Harrison et al's No. 2 Addis, 990 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
S.D. 3,845 ft.

Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Location.

Humble Oil & Ref. Co.'s No. 3 Jones, 2,310 ft. from S and 2,310 ft. from W, Sec. 6, Blk. 44, Twp. 3s, T.&P. Sur.
T.D. 855 ft.

Humble Oil & Ref. Co.'s No. 1 H. H. Pegues, 2,310 ft. from E and 2,310 ft. from S, Sec. 37, Blk. 43, Twp. 2s, T.&P. Sur.
Rig up.

(Continued on Page 43)

COMPLETIONS IN WEST TEXAS

Glasscock County

Simms Oil Co.'s No. 3 W. P. Edwards, dry and abandoned, total depth 2,313 feet. H. O. Wooten's No. 2 C. Edwards, top pay 2,234-50 feet, initial production 46

(Continued on Page 40)

Hot Oil From East Texas 64,000 Barrels a Day According to Those Checking Operations

By L. E. BREDBERG

DALLAS, Tex., July 16.—The Railroad Commission came in for further criticism this week during and after a meeting held by a group of bankers and others to discuss the "hot oil" situation. Commissioner E. O. Thompson again made the statement that "hot oil" production is a thing of the past. Whereupon, Carl Estes, of Tyler, placed a page advertisement in a local paper, and used the radio to tell what he thought about the Railroad Commission.

About the same time Colonel Thompson was making statements to the press that "hot oil" was a thing of the past, he was asking those who attended the bankers' meeting for finances with which another 100 men could be hired by the commission to carry on investigations in the field, two divergent views that cannot be easily reconciled.

The commission previously "passed the buck" to three East Texas bankers in the passing on oil tenders, and at present seem to be at a standstill as to which way to turn. In his speech over the radio and in the newspaper advertisement, Mr. Estes asked for contributions with which more men could be hired. He advocated the placing of men on all loading racks, at each refinery and on pipe lines to check the quantity of oil being produced and run from the field, the only practical method possible in view of the great number of wells now producing, some 13,800. With the Texas Bankers Association interested in the fight against "racketeers," there is a chance of more being done than in the past, especially if bankers who have been helping to finance some of the recalcitrant operators threaten or do cut off financial assistance unless illegal practices are stopped.

"Hot oil" is leaving the field at the rate of at least 64,000 bbls. per day, according to the men who are in close touch with the situation and have special duties of checking production and transportation of crude from the field.

Bottom Hole Pressure

The average bottom hole pressure for the field has been placed at 1,242 pounds this month, but potential tests taken on wells in the Gladewater townsite in the northwest part of the field and on the west side indicate the potential in these and possibly other sectors of the field are much less than when the last tests were taken.

Reports from the field state that companies and independents are giving more consideration to the question of when their wells will require pumping. Both groups have been inquiring as to prices on such equipment and are studying the many methods used for lifting oil, especially some of the latest developed pumping and lifting equipment. The average bottom hole pressure for the entire field seems sufficiently high to forestall the need for pumping equipment for some time, but certain parts, especially in the Joiner area of Rusk County, and on the extreme north end of the field, are extremely low in pressure and wells now completed require pumping immediately after being brought in. Each week's completion report shows a few wells put on the pump in these sections as the wells are completed. If only 10 per cent of the wells required pumping the number would run around 1,380 or by far a greater number of wells than are producing in many major fields in the country. However, many wells have already been equipped with part of the pumping equipment, and some with all of it, consequently this number will not have to be rigged up, although there will be several hundred that will demand standardizing or putting on powers, which will call for a large amount of such equipment. Two pumpers were completed this week, on the northern end of the field, and another producer was put on air lift after completing, adding to the number of pumpers already in the field.

No authentic report on the number of pumping wells can be obtained in the field, for many operators do not report their pumping wells. They let these wells stand, without reporting and rigging up pumping equipment, electing to save that expense and take the allowable from the shut-in producer from another flowing well on the same lease. This is against regulations, but many worse things are done in the field against regulations without the operators being brought to account.

Completions and Locations

There were 85 wells completed in the field this week and 87 locations staked.

Distribution reports for the week ending July 13 show a total of 461,100 bbls. per day transported by 16 main lines. There were 35 refineries shut down, the remaining 43 handling 66,510 bbls. per day, while tank car shipments were only 240 a day. This made the total daily average deliveries over and above reported production run around 64,400 bbls. per day.

Cayuga Field

A southern extension, drilled on the Edens farm to the south of the discovery well in the Cayuga Field, northwest Anderson County, was completed this week as a 20,000,000-foot gasser at a total depth of 3,912 feet after topping the gas sand at 3,895 feet. This was completed to provide fuel for drilling other tests in the field by the owners, Tide Water Oil Co. and Texas Seaboard Oil Co., joint owners of the discovery well and the large block surrounding it. The same companies' No. 1 J. A. Campbell in the James Wilson Survey, about 1½ miles southeast of the discovery, is showing for a good extension to the pool. It cored oil sand from 4,035-42 feet and is shut down after cementing casing at 4,048 feet. It will mean about 1-mile extension from the nearest producer to the north.

A hearing was held at Austin on July 12 by the Railroad Commission at which time engineers for the Tide Water Oil Co. recommended that the allowable for the Cayuga Field be distributed on an acreage basis entirely to prevent the drilling of unnecessary wells. An allowable of 200 bbls. for each 20-acre producing unit was asked. The field has a present daily allowable of 1,500 bbls., which places the per well allowable at 100 bbls. George Nye of the company stated that 5,300 acres had been proved up, the east and west limits having been defined. Wells were said to cost an average of $30,000 each. The commission has taken the recommendations under advisement.

J. A. Johnson and others have a derrick for a Woodbine sand test on the Mrs. N. B. Huffman farm in the R. S. Patton Survey, 10 miles northwest of Palestine in Anderson County. It is reported the Ray Drilling Co. is to drill in the Tennessee Colony area and the Canadian Oil Co. has staked location in this area on the Jackson farm in the W. C. Caldwell Survey. Footage is 1,250 feet from the northeast and 3,050 feet from the southeast, 2 miles southwest of Tennessee Colony near Keechi Dome and several miles northwest of Palestine in Anderson County.

An interesting location has been staked and rig is being moved in on the G. R. Young farm in the J. M. Boone Survey, 4 miles southeast of the Long Lake Pool in Leon County. Kellough and Tucker will drill this Woodbine sand test.

Cherokee County

Another interesting test for the southern tier of East Texas counties, will be that of the H. L. Hunt Production Co. on the Powell Lumber Co. lands 1¼ miles northeast of the Rusk discovery well in Cherokee County. Location is 467 feet from the south and west lines of a 52-acre tract in the D. W. McNab Survey.

Wood and others are spudding on their second test, a north offset to the Rusk discovery in Cherokee County. The discovery well is making around 575 bbls. of oil per day, producing through various size chokes on tubing. It is also making about 10 per cent salt water.

Confirmation could not be obtained on the reported deal that the Sinclair Prairie Oil Co. had purchased a half interest in the McCulloch-Zilke test on the Bradford farm in the J. Armendaris Survey, 4 miles southeast of Rusk and approximately 10 miles northeast of Rusk discovery in Cherokee County. The test is shut down at 3,840 feet.

Boring and Grelling have leased 6,500 acres south of Ironton and northwest of Maydelle on the western edge of Cherokee County for the Humble Oil & Refining Co. The block is near the Neches River and south of the Boggy Creek Pool.

Humphries and Lutz have taken a block of approximately 1,200 acres northeast of Palestine in the Walter Pool Survey, with a tentative location reported in the central part of the J. M. McKee 800-acre tract in said survey, Anderson County.

The old T. C. Cardwell test on the W. C. Wallace farm in the C. Burnett Survey, 5 miles northeast of Jacksonville in Cherokee County, was reported to have been taken over by Mr. Percy who will drill it deeper from 4,141 feet where it was abandoned in shale.

Freestone County

J. E. Milburn and others have assembled 4,000 acres in the southwest corner of Freestone County, lying partly in the J. P. Fulton, G. W. McGrew, east half of the Diaz, J. Tyler and other surveys. A location has been staked for a Woodbine sand test on the S. E. Ashan farm in the G. Diaz Survey, 2½ miles southeast of the town of Donie.

Practically every major company has one or more shooting crews working in various parts of the southern section of the East Texas district and during the next few months many blocks will no doubt be taken and many wildcats drilled to test the findings.

Crosby and Pulp have made location on the M. T. Dobbs farm in the George Aldrick Survey, 4 miles east of Malakoff in Henderson County, approximately 15 miles north of the Cayuga Field of northwest Anderson County.

In the northern part of the East Texas district Humble Oil & Refining Co. has set casing at 165 feet on its No. 1 Merchants & Traders Bank test in the J. Askey Survey, 5 miles southeast of Talco in Franklin County.

John Keegan has assembled a block of 4,200 acres south and east of Red Water in Bowie County and will drill a Woodbine test.

J. D. Cooper of Houston has taken leases on some 5,000 acres between 4 and

East Central Texas Wildcats

Week Ending July 16

ANDERSON COUNTY

Barnsdall Oil Co.'s No. 1 Loper, 467 ft. from N and W lines of 40-ac. tract, 1 mile SW of Cayuga, James Wilson Sur.
Drlg. 2,431 ft.

H. L. Hunt's No. 1 C. A. Miller, 1,120 ft. from SE line and 1,120 ft. from SW line of 196.6-ac. tract, 1 mile S of Tucker, S. Sanches Sur. No. 2-10.
Location.

J. A. Johnson et al's No. 1 Mrs. N. B. Huffman, 1,650 ft. from W line and 2,700 ft. from S line of survey, 10 miles NW of Palestine, R. S. Patton Sur.
Derrick.

Stanolind Oil & Gas Co.'s No. 1 Loper, 483 ft. S and 466 ft. E of NW cor. of 40-ac. tract, James Wilson Sur.
Location.

Sun Oil Co.'s No. 1 Erskine, 200 ft. from S line of survey and 3,000 ft. from Trinity River, Samuel C. Box Sur., SW part of county.
Drlg. plug; T.D. 2,200 ft.

Texas Seaboard Oil Co.'s No. 3 Edens, 467 ft. from N and E lines of tract, Samuel Snyder Sur.
Coring 4,078 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 J. A. Campbell, 1,260 ft. from N line and 440 ft. from W line of 243-ac. tract, James Wilson Sur.
Set csg.; T.D. 4,048 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1 Royal and Cone, 467 ft. from S line and 1,533 ft. from E line of 92-ac. tract, Thomas Bristow Sur.
Drlg. 3,900 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 4 Edens, 2,871 ft. from N line and 467 ft. from E line of tract, Samuel Edmondson Sur.
Set csg.; T.D. 4,059 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 2 Robertson, 633 ft. from W line and 407 ft. from N line of lease, Samuel Snider Sur.
Clearing location.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1-B Virginia Wills (Boyer), 467 ft. from S and E lines of lease, M. H. John Sur.
Set csg.; T.D. 4,075 ft.

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 1-C N. N. Wills, 477 ft. from S line and 467 feet from W line of tract, Thomas Bristow Sur.
Location.

CHEROKEE COUNTY

Jackson Oil & Gas Co.'s No. 1 H. D. Henderson, 660 ft. from N and W lines of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur.
Moving in.

H. L. Hunt Production Co.'s No. 1 Powell Lumber Co., 467 ft. from S and W lines of 52-ac. tract, 1 mile E and one-quarter mile N of discovery well, D. W. McNab Sur.
Location.

Southern Gulf Oil Co.'s No. 1 Joe Bailey, center 164-ac. tract, 4 miles NE of Ponta, L. R. Rhodes Sur., Abstract No. 724.
S.D. 300 ft.

T. J. Wood et al's No. 2 New Birmingham Dev. Co., 660 ft. W and 330 ft. S of No. 1, Levi Jordan Sur.
Clearing location.

T. J. Wood et al's No. 3 New Birmingham Dev. Co., 660 ft. N and 330 ft. E of No. 1, Levi Jordan Sur.
Location.

Zilkey and McCulloch's No. 1 Bradford, 2,500 ft. from most southerly S line and 771 ft. from E line of survey, 4 miles E of Rusk, J. Armendaris Sur.
S.D. 3,840 ft.

(Continued on Page 43)

"BETHLEHEM" IS TRULY A GREAT NAME IN STEEL—
BETHLEHEM "MAYARI" IS A TRULY GREAT SUCKER ROD

With all their vast experience with steel, and new, modern equipment, Bethlehem has produced Sucker Rods that have been thoroughly tested in the toughest wells in West Texas—in Kansas—in Oklahoma—and in California. As a matter of fact, dozens of major operators have been prone to purposely test them in wells where sucker rod expense was greatest. Repeat orders have proven conclusively the economy of Bethlehem Sucker Rods.

Engineering and purchasing departments are invited to inquire about construction details, manufacturing methods and the many interesting records of performance of Bethlehem Sucker Rods.

Adequate stocks of Bethlehem Sucker Rods are carried at McPherson and Chase, Kansas; at Maud and Oklahoma City, Oklahoma; and at Kilgore and Houston, Texas.

LUCEY

"WHEREVER THERE'S OIL"

LUCEY PRODUCTS CORPORATION

TULSA, OKLAHOMA HOUSTON, TEXAS

LUCEY EXPORT CORPORATION
NEW YORK CITY

5 miles northeast of Alba in Wood County, same lying in the E. G. Goodsine, D. Adams and other adjacent surveys.

Railroad Commission Hearing

The Railroad Commission has announced hearing on July 23 at 2 p. m. at Austin, on the Rusk Field in Cherokee County, to consider rules, regulations and orders to prevent waste.

COMPLETIONS IN EAST TEXAS

Cayuga Area—Anderson County

Tide Water Oil Co. and Texas Seaboard Oil Co.'s No. 5 Edens, base Pecan Gap 2,365 feet, top broken Austin chalk 3,112 feet, top hard Austin chalk 3,105 feet, top gas sand 3,895 feet, initial production 20,000,000 feet of gas, total depth 3,912 feet.

Cherokee County

C. & G. Oil Co.'s No. 1 New Birmingham, top Pecan Gap 3,878 feet, base 4,217 feet, top Austin chalk 4,800 feet, base 4,982 feet, top Woodbine sand 4,991 feet, top Red Beds 4,991 feet, cored salt water sand from 4,999-5,012 feet, dry and abandoned, total depth 5,012 feet; T. F. Timmons Survey. T. J. Wood and others' No. 1 New Birmingham, top Pecan Gap 2,985 feet, base 4,306 feet, top Austin chalk 4,840 feet, base 4,976 feet, top sand 5,121 feet, whipstocked back 180 feet, drilled out to 5,124 feet, initial production 25 bbls. per hour through three-sixteenths inch tubing choke; Levi Jordan Survey.

EAST TEXAS FIELD

North Gregg County

Alco Royalty Co.'s No. 3 King, top sand 3,610 feet, initial production 150 bbls., total depth 3,641 feet. Amada Petroleum Co.'s No. 7 Magrill, top sand 3,658 feet, initial production 15 bbls. in one-quarter hour through open tubing, total depth 3,699 feet. Ambrose's No. 4-B Jones, top sand 3,542 feet, initial production 28 bbls. in one-quarter hour through open tubing, total depth 3,607 feet. Atlantic Oil Producing Co.'s No. 60 Judge, top sand 3,515 feet, initial production 76 bbls. in one-half hour through open tubing, total depth 3,540 feet; No. 59 Judge, top sand 3,515 feet, initial production 125 bbls. through open tubing, total depth 3,540 feet; No. 61 Judge, top sand 3,503 feet, initial production 72 bbls. in one-half hour through open tubing, total depth 3,525 feet; No. 59 Moore, top sand 3,513 feet, initial production 60 bbls. per hour through open tubing, total depth 3,543 feet. Davis and others' No. 4 Harrison, top sand 3,548 feet, initial production 38 bbls. in one-quarter hour through open tubing, total depth 3,574 feet. Faith Oil Co.'s No. 10 J. C. Barrett, top sand 3,672 feet, initial production 60 bbls., total depth 3,682 feet. General Crude Oil Co.'s No. 9 Rambert, top sand 3,497 feet, initial production 18 bbls. in one-quarter hour through open tubing, total depth 3,527 feet.

Gulf Production Co.'s No. 8 A. Neeley, top sand 3,503 feet, initial production 50 bbls. per hour through open tubing, total depth 3,533 feet. Humble Oil & Refining Co.'s No. 6 L. Christian, top sand 3,629 feet, initial production 87 bbls. per hour through open tubing, total depth 3,627 feet; No. 10 E. W. Clements, top sand 3,513 feet, initial production 90 bbls. per hour through open tubing, total depth 3,566 feet; No. 14 Mackey, top sand 3,605 feet, initial production 8 bbls. in one-quarter hour by heads, total depth 3,616 feet. T. D. Humphrey's No. 1 Johnson, top sand 3,592 feet, initial production 30 bbls. in 24 hours, total depth 3,580 feet. Lechner and Hubbard's No. 4-A Holley, top sand 3,562 feet, initial production 45 bbls. in one-half hour through open tubing, total depth 3,580 feet. Magnolia Petroleum Co.'s No. 11 Todd-Stichcomb, top sand 3,548 feet, initial production 31 bbls. in one-quarter hour through open tubing, total depth 3,570 feet. A. D. Morton's No. 2 Tom Hensley, top sand 3,545 feet, initial production 85 bbls. per hour through open tubing, total depth 3,565 feet.

Selby Oil & Gas Co.'s No. 17-A Snavely, top sand 3,585 feet, initial production 43 bbls. in one-quarter hour through open tubing, total depth 3,599 feet; No. 9 Snavely, top sand 3,583 feet, initial production 37 bbls. in one-half hour through open tubing, total depth 3,593 feet. Sells Petroleum Co.'s No. 4 Fisher, top sand 3,592 feet, initial production 92 bbls. per hour through open tubing, total depth 3,669 feet. Simms and Stanolind Oil & Gas companies' No. 26-B J. J. Flewellen, top sand 3,678 feet, initial production 37 bbls. in one-half hour through open tubing, total depth 3,703 feet. Tide Water Oil Co.'s No. 29 Devernia, top sand 3,491 feet, initial production 13 bbls. in 10 minutes through 1-inch tubing choke, total depth 3,531 feet.

South Gregg County

Amerada Petroleum Corp.'s No. 4 Jenkins, top sand 3,525 feet, initial production 40 bbls. per hour through open tubing, total depth 3,545 feet. Atlantic Oil Producing Co.'s No. 13 L. P. Griffin, top sand 3,546 feet, initial production 60 bbls. in one-half hour through open tubing, total depth 3,604 feet. Bay Oil Co.'s No. 4 Godfrey, top sand 3,555 feet, initial production 30 bbls. in one-half hour through open tubing, total depth 3,575 feet. Cal-Tex Oil Corp.'s No. 7 L. D. Crim, top sand 3,575 feet, initial production 100 bbls. per hour through open tubing, total depth 3.581 feet. Cloverleaf Oil Co.'s No. 2 C. Carr, top sand 3,503 feet, initial production 18 bbls. in one-quarter hour through three-quarters inch tubing choke, total depth 3,523 feet.

Gulf Production Co.'s No. 23 H. C. Alexander, top sand 3,537 feet, initial production 60 bbls. per hour through open tubing, total depth 3,562 feet; No. 12 Birdsong, top sand 3,577 feet, initial production 35 bbls. in one-half hour through open tubing, total depth 3,598 feet; No. 7 Hall, top sand 3,657 feet, initial production 30 bbls. in 40 minutes through open tubing, total depth 3,664 feet. Magnolia Petroleum Co.'s No. 22 J. Radford, top sand 3,636 feet, initial production 22 bbls. in one-quarter hour through open tubing, total depth 3,641 feet. M. C. Scheble's No. 6-C Sabine River, top sand 3,519 feet, initial production 80 bbls. per hour through open tubing, total depth 3,549 feet; No. 6-R Sabine River, top sand 3,521 feet, initial production 75 bbls. per hour through open tubing, total depth 3,551 feet. Sam Shellbourne's No. 3 W. B. Walker, top sand 3,559 feet, initial production 55 bbls. per hour through open tubing, total depth 3,564 feet.

Shell Petroleum Corp.'s No. 6-A J. S. Elder, top sand 3,590 feet, initial production 45 bbls. in 45 minutes through open tubing, total depth 3,600 feet; No. 22 W. W. Elder, top sand 3,553 feet, initial production 32 bbls. in one-half hour through open tubing, total depth 3,625 feet; No. 39 J. B. Watson, top sand 3,570 feet, initial production 22 bbls. in one-quarter hour through open tubing, total depth 3,648 feet. Sneeden and others' No. 1 J. Sparks, top sand 3,512 feet, initial production 20 bbls. in one-half hour through open tubing, total depth 3,520 feet. Sowell Oil Co.'s No. 1 Wells, dry and abandoned, total depth 3,680 feet. Sultana Oil Co.'s No. 1-A Sabine River, top sand 3,536 feet, initial production 115 bbls. in 50 minutes through 1-inch tubing choke, total depth 3,555 feet.

Sun Oil Co.'s No. 16 J. R. Beall, top sand 3,611 feet, initial production 60 bbls. per hour through open tubing, total depth 3,626 feet. Gulf Production Co.'s No. 14 Florence, top sand 3,673 feet, initial production 60 bbls. through three-quarters inch tubing choke, total depth 3,680 feet; No. 3 Oten, top sand 3,579 feet, initial production 45 bbls. per hour through three-quarters inch tubing choke, total depth 3,672 feet. Humble Oil & Refining Co.'s No. 116 L. D. Crim, top sand 3,645 feet, initial production 61 bbls. per hour through open tubing, total depth 3,670 feet; No. 7-A Ladd, top sand 3,650 feet, initial production 59 bbls. per hour through open tubing, total depth 3,697 feet; No. 55-B Laird, top sand 3,570 feet, initial production 77 bbls. per hour through open tubing, total depth 3,632 feet; No. 22-B Sexton, top sand 3,651 feet, initial production 60 bbls. per hour through open tubing, total depth 3,752 feet. Louisiana Oil & Refining Co.'s No. 5 Mayfield, top sand 3,648 feet, initial production 27 bbls. in one-quarter hour through open tubing, total depth 3,700 feet. Magnolia Petroleum Co.'s No. 10 Wells, top sand 3,646 feet, initial production 28 bbls. in two hours swabbing, total depth 3,724 feet. Tide Water Oil Co.'s No. 5-C Buntyn, top sand 3,680 feet, initial production 25 bbls. in one-quarter hour through open tubing, total depth 3,708 feet.

Atlantic Oil Producing Co.'s No. 2-B J. E. Strickland, top sand 3,590 feet, initial production 15 bbls. per hour through open tubing, total depth 3,668 feet. Combined Oil Interest's No. 20 G. W. Eaton, top sand 3,722 feet, initial production 80 bbls. per hour through open tubing, total depth 3,735 feet. Fair and Thompson's No. 2 Bradford, top sand 3,575 feet, initial production 30 bbls. per hour through open tubing, total depth 3,638 feet. W. F. Fischer's No. 3 G. W. Wilson, top sand 3,714 feet, initial production 285 bbls. in two hours, total depth 3,770 feet. Gant-Garvin and Wegener's No. 2 Hale, top sand 3,572 feet, initial production 20 bbls. by heads, total depth 3,608 feet. Hinchliffe's No. 3 Pinkston, top sand 3,729 feet, initial production 100 bbls. per hour through open tubing, total depth 3,765 feet.

Humble Oil & Refining Co.'s No. 44-A M. and R. Kangerga, top sand 3,635 feet, initial production 91 bbls. per hour through open tubing, total depth 3,670 feet; No. 15-A J. H. Silvey, top sand 3,686 feet, initial production 78 bbls. per hour through open tubing, total depth 3,696 feet; No. 41-A Silvey, top sand 3,658 feet, initial production 75 bbls. per hour through open tubing, total depth 3,734 feet; No. 45-A R. E. L. Silvey, top sand 3,629 feet, initial production 75 bbls. per hour through open tubing, total depth 3,713 feet. Hunt Productoin Co.'s No. 11 W. P. Moore, top sand 3,626 feet, initial production 33 bbls. in 13 minutes through open tubing, total depth 3.640 feet. John Mabee's No. 2-B J. P. Maxwell, top sand 3,630 feet, initial production 10 bbls. in 10 minutes' swabbing, total depth 3,651 feet.

Magnolia Petroleum Co.'s No. 4 Mayfield, top sand 3,593 feet, initial production 35 bbls. per hour through open tubing, total depth 3,668 feet. Mid-Kansas Oil & Gas Co.'s No. 21 Burton, top sand 3,680 feet, initial production 76 bbls. per hour through open tubing, total depth 3,721 feet. Miller Production Co.'s No. 10 D. Bradford, top sand 3,510 feet, initial production 20 bbls. per hour through open tubing, total depth 3,640 feet. Overton Refining Co.'s No. 7 Clay, top sand 3,555 feet, initial production 15 bbls. per day pumping, total depth 3,645 feet. Rogers and others' No. 1 Neal, top sand 3,662 feet, initial production 10 bbls. in one-half hour pumping, total depth 3,716 feet. Texas Co.'s No. 18 A. Kirsch, top sand 3,624 feet, initial production 104 bbls. per hour through open tubing, total depth 3,630 feet.

Smith County

Humble Oil & Refining Co.'s No. 10 M. C. Thompson, top sand 3,617 feet, initial production 29 bbls. in one-half hour through seven-eighths inch tubing choke, total depth 3,626 feet. McCullough and Zilkey's No. 3 Wilson, top sand 3,763 feet, initial production 65 bbls. per hour through open tubing, total depth 3,766 feet. A. McCutcheon's No. 2 Irion, top sand 3,739 feet, initial production 43 bbls. in 25 minutes through open tubing, total depth 3,745 feet. Smith County Oil & Gas Co.'s No. 5 S. S. Cook, top sand 3,726 feet, initial production 50 bbls. in one-half hour through 1-inch tubing choke, total depth 3,728 feet. L. Sneed's No. 3 Salem Church, top sand 3,766 feet, initial production 60 bbls. per hour through open tubing, total depth 3,767 feet.

Upshur County

Eastern Texas Petroleum Co.'s No. 10 D. A. Fleet, top sand 3,673 feet, initial production 20 bbls. in 20 minutes through open tubing, total depth 3,675 feet; No. 14 D. F. Smith, top sand 3,571 feet, initial production 20 bbls. in 40 minutes through open tubing, total depth 3,584 feet; No. 15 D. F. Smith, top sand 3,573 feet, initial production 20 bbls. per hour through open tubing, total depth 3,585 feet. Humble Oil & Refining Co.'s No. 6 M. Mattox, top sand 3,666 feet, initial production 40 bbls. per hour through open tubing, total depth 3,689 feet; No. 23 J. D. Smith, top sand 3,611 feet, initial production 89 bbls. per hour through open tubing, total depth 3,641 feet. Perrin and Fell's No. 4 W. M. Landers, top sand 3,718 feet, initial production 80 bbls. per hour through open tubing, total depth 3,722 feet. E. L. Smith's No. 5 E. A. Watts, top sand 3,610 feet, initial production 75 bbls. per hour through open tubing, total depth 3,619 feet. Twin Oil Co.'s No. 12 M. Bonner, top sand 3,565 feet, initial production 52 bbls. per hour through open tubing, total depth 3,660 feet. J. A. Wood and others' No. 8 J. H. Sheppard, top sand 3,652 feet, initial production 62 bbls. in 25 minutes through three-quarters inch tubing choke, total depth 3,689 feet.

Limestone County

J. Rodgers and others' No. 1 DeLong, location abandoned.

Wood County

D. T. Cauble and Thompson's No. 1-A Bobbett, top Pecan Gap 2,950 feet, top Austin chalk 4,380 feet, base 4,995 feet, dry and abandoned, total depth 5,554 feet.

West Texas Fields

(Continued from Page 37)

bbls. in two hours, total depth 2,250 feet. Continental Oil Co.'s No. 9 Settles, top pay 2,340-90 feet, initial production 79 bbls. in 24 hours, total depth 2,390 feet. Plymouth Oil Co.'s No. 10 Kloh, top pay 2,329-43 feet, initial production 53 bbls., total depth 2,543 feet.

Ector County

Stanolind Oil & Gas Co.'s No. 6 J. M. Cowden, top pay 4,138-4,333 feet, initial production 165 bbls. in 24 hours after shot, total depth 4,333 feet.

Pecos County

Mac T. Anderson's No. 1 T. N. McKenzie, top pay 1,338-78 feet, initial production 15 bbls., total depth 1,378 feet. Humble Oil & Refining Co.'s No. 1 White and Baker, dry and abandoned, total depth 9,811 feet, tested 100 bbls. of sulphur water per hour on drill stem test from 9,690-9,768 feet.

Upton County

Texas Pacific Coal & Oil Co.'s No. 3 J. F. Lane, top pay 2,330-70 feet, initial production 262 bbls., total depth 2,378 feet.

Ward County

California Co.'s No. 3 York, top pay 2,368 feet, initial production 271 bbls., total depth 2,524 feet. West Texas Oil Corp.'s No. 1 Monroe, dry and abandoned, total depth 2,670 feet.

Winkler County

Sid Richardson's No. 5 Skelly-Scarborough, top pay 2,900-3,065 feet, initial production 218 bbls. in 24 hours, total depth 3,065 feet.

COMPLETIONS IN NORTH TEXAS

Archer County

Bridwell Oil Co.'s No. 9-E Falls County, lime 1,104-21 feet, initial production 30 bbls. swabbing per hour, total depth 1,121 feet. L. T. Burns' No. 8 Perkins, oil sand 1,607-11 feet, initial production 300 bbls. swabbing, total depth 1,611 feet. Burns and Long's No. 13-R Wilson, oil sand 1,448-53 feet, initial production 60 bbls., total depth 1,453 feet. Barney Cockburn's No. 2 Anderson, lime 1,396-1,406 feet, initial production 300 bbls., total depth 1,406 feet. James N. Crofton's No. 1 Bishop, lime 1,405-23 feet, initial production 30 bbls. pumping per hour, total depth 1,423 feet. James N. Crofton's No. 4 Logan, lime 1,156-76 feet, initial production 25 bbls. per hour pumping, total

MOLY

makes steel easier to weld

WITH welding rapidly replacing riveting, Molybdenum is being discussed more and more among those having welding problems. Today many concerns, both in the United States and abroad, are using either Molybdenum steel welding rods or welding rods coated with sufficient Molybdenum to produce an alloy steel in the weld . . . even to join plain carbon steel plates or shapes. The advantages of this practice are in the achievement of welds of higher strength and toughness than could be attained with a plain Carbon rod.

"Moly" is practically the only alloy usable in steel which does not in any way interfere with welding practice. The use of Carbon Molybdenum steel plate with a Molybdenum welding rod is the ideal combination for high-strength welded units.

The Climax Molybdenum Company has compiled much data on the strength of Molybdenum steel weld sheets. We shall be glad to give you the service of our metallurgists and our Detroit experimental laboratory to help you with your problems.

Moly always improves steel. It increases, among other properties, the ultimate strength, creep strength and resistance to wear. It produces a superior steel at a competitive initial price and often with a lower fabricating cost. Our latest publication on Molybdenum gives details. Write for it. Climax Molybdenum Co., 295 Madison Ave., New York.

CLIMAX **Mo-lyb-den-um**

depth 1,176 feet. Fain & McGaha's No. 9 Green, lime 1,165-88 feet, initial production 800 bbls., total depth 1,188 feet; No. 13 Green, lime 1,142-59 feet, initial production 300 bbls., total depth 1,159 feet. Fain & McGaha and Humble Oil & Refining Co.'s No. 37 Logan, lime 1,143-58 feet, initial production 500 bbls. swabbing, total depth 1,158 feet. Fain & McGaha and others' No. 38 Logan, lime 1,140-55 feet, initial production 250 bbls., total depth 1,155 feet. Fain & McGaha and others' No. 39 Logan, lime 1,148-65 feet, initial production 300 bbls. swabbing, total depth 1,165 feet.

W. B. Hamilton's No. 3 Ward, dry and abandoned, total depth 1,058 feet. Huggins Oil Co.'s No. 1-B Parkey, dry and abandoned, total depth 1,706 feet. Justice Oil Co.'s No. 4 Justice, lime 1,066-76 feet, initial production 40 bbls., total depth 1,076 feet. N. H. Martin's No. 1 Seals, dry and abandoned, total depth 1,428 feet. W. E. Maxson, Jr.'s No. 26 Green, lime 1,079-98 feet, initial production 30 bbls. per hour, total depth 1,098 feet. Paul J. McIntyre's No. 2 Anderson, lime 1,414-20 feet, initial production 20 bbls. of oil and 10 bbls. of water, total depth 1,420 feet. W. B. Omohundro's No. 1 Perkins, dry and abandoned, total depth 1,485 feet.

Panhandle Refining Co.'s No. 10 Anderson, lime 1,393-1,404 feet, initial production 210 bbls., total depth 1,404 feet. Peckham and Medders' No. 3 Justice, lime 1,088-1,103 feet, initial production 18 bbls. per hour, total depth 1,103 feet. Perkins and Cullum's No. 9-B Falls County, lime 1,101-08 feet, initial production 175 bbls., total depth 1,108 feet; No. 23 Falls-Titken, lime 1,150-66 feet, initial production 200 bbls., total depth 1,166 feet. Pois and Schultz' No. 26 Green, lime 1,124-41 feet, initial production 350 bbls., total depth 1,141 feet; No. 27 Green, lime 1,140-58 feet, initial production 500 bbls., total depth 1,158 feet. Staniforth and Ray's No. 12 Wilson, oil sand 1,604-10 feet, initial production 250 bbls. pumping, total depth 1,610 feet; No. 2 Richardson, lime 1,393-1,412 feet, initial production 175 bbls., total depth 1,412 feet. J. W. Stone's No. 2 Abercrombie, dry and abandoned, total depth 1,400 feet. Texas Co.'s No. 1 Rhome, lime 1,162-65 feet, initial production 8 bbls., total depth 1,165 feet. United Producers Co.'s No. 1 Harmonson, oil sand 975-83 feet, initial production 10 bbls., total depth 983 feet.

Clay County

Texas Co.'s No. 2 George, oil sand 1,131-33 feet, initial production 66 bbls., total depth 1,133 feet.

Cooke County

Hill and Christian's No. 1 fee, abandoned location.

Jack County

Levine and Amagas' No. 1 Carter, dry and abandoned, total depth 503 feet. N. H. Martin's No. 2 Bloodworth, oil sand 291-95 feet, initial production 7 bbls., total depth 295 feet. John Whitener's No. 2 Craig, dry and abandoned, total depth 322 feet.

Montague County

O. V. Beck's No. 3 Davenport, oil sand 1,675-1,703 feet, initial production 390 bbls., total depth 1,703 feet.

Wilbarger County

Consolidated Oil Co.'s No. 1-W W. T. Waggoner, dry and abandoned, total depth 1,901 feet. R. H. Cooke Oil Co.'s No. 1 Streit, temporarily abandoned, total depth 1,200 feet. L. W. Fritz and others' No. 1 W. T. Waggoner, oil sand 1,953-61 feet, temporarily abandoned, total depth 1,963 feet. Golding and Cochran's No. 1-B W. T. Waggoner, dry and abandoned, total depth 1,990 feet. W. B. Hamilton's No. 6-L W. T. Waggoner, oil sand 1,288-93 feet, initial production 30 bbls. of oil and 10 bbls. of water, total depth 1,293 feet.

Hegralle Oil Co.'s No. 2-A W. T. Waggoner, oil sand 1,885-88 feet, initial production 320 bbls., total depth 1,888 feet; No. 3-A W. T. Waggoner, oil sand 1,868-78 feet, initial production 280 bbls., total depth 1,878 feet. S. J. Lynch's No. 1 Jokel, temporarily abandoned, total depth 2,225 feet. Phillips Petroleum Co.'s No. 5-C W. T. Waggoner, lime 2,626-31 feet, initial production 8 bbls. of oil and 8½ bbls. of water, total depth 2,631 feet. Pigg and Daniel's No. 1 W. T. Waggoner, oil sand 2,566-75 feet, initial production 50 bbls. of oil and 20 bbls. of water, total depth 2,583 feet. M. L. Richards' No. 1-D W. T. Waggoner, dry and abandoned, total depth 1,100 feet.

Wichita County

H. I. Covert and others' No. 1 May, dry and abandoned, total depth 826 feet. Empire Holding Corp.'s No. 1 Foster, dry and abandoned, total depth 2,002 feet. Golding & Cochran's No. 12 Waggoner, oil sand 1,375-91 feet, initial production 20 bbls., total depth 1,391 feet. T. F. Hunter's No. 3-H Waggoner Brothers, dry and abandoned, total depth 1,873 feet. Stanley A. Thompson's No. 1 Griffin, dry and abandoned, total depth 1,850 feet. United Producers Co.'s No. 5 Kemp and Blair, dry and abandoned, total depth 1,812 feet. Texas Plains Oil Co.'s No. 2-C W. T. Waggoner, oil sand 354-70 feet, initial production 7 bbls., total depth 1,551 feet.

Young County

Christie Brothers' No. 1 McComas, oil sand 3,863-4,113 feet, initial production 14 bbls. of oil and 2 bbls. of water per hour, total depth 4,113 feet. R. C. Crabb and others' No. 1 Hightower, dry and abandoned, total depth 1,302 feet. Hunt and Thomas' No. 3 Myers, dry and abandoned, total depth 1,067 feet. L. A. Long's No. 1 Meyers-State, oil sand 2,442-95 feet, initial production 20 bbls. of oil, total depth 2,498 feet. Nash and Windfohr's No. 12 Graham-Vick, oil sand 2,575-85 feet, initial production 170 bbls. pumping, total depth 2,585 feet. Petroleum Producers Co.'s No. 1 Hunt, dry and abandoned, total depth 1,070 feet.

COMPLETIONS IN RANGER

Brown County

Humble Oil & Refining Co.'s No. 5-A Kilgore, show of oil 1,198 feet, initial production 14 bbls., total depth 1,215 feet. Petroleum Oil Interest, Inc.'s No. 2 R. A. Thompson, dry and abandoned, total depth 1,345 feet.

Callahan County

Roy Fields and others' No. 1 M. Alexander, dry and abandoned, total depth 1,218 feet. Cleve Galloway's No. 1 Heyser, dry and abandoned, total depth 550 feet.

Coleman County

Mayfield and others' No. 1 Rude, dry and abandoned, total depth 986 feet. J. C. and M. L. Shaffer's No. 9 George W. Garrett, top sand 2,216 feet, initial production 1,500,000 feet of gas, total depth 2,285 feet.

Palo Pinto County

Palo Pinto Oil & Gas Co.'s No. 10 Strawn Coal Co., top sand 2,779 feet, initial production 7,000,000 feet of gas, total depth 3,000 feet.

Shackelford County

Charter Oil Co.'s No. 2 Morris-Buie, pay 1,390-1,400 feet, initial production 7 bbls., total depth 1,410 feet. Engle and Kiser's No. 1 J. B. Matthews, dry and abandoned, total depth 1,150 feet. F. H. E. Oil Co.'s No. 1 Goodwin, dry and abandoned, total depth 777 feet. Gilman and McMurray's No. 1 Morris-Buie, show of oil 1,586-1,600 feet, initial production 15 bbls., total depth 1,621 feet. J. P. Harris' No. 2-B Matthews, sand 798-808 feet, initial production 30 bbls., total depth 808 feet. James and Klinger's No. 1 George, dry and abandoned, total depth 800 feet. King Royalty Co.'s No. 1 Elliott, dry and abandoned, total depth 2,129 feet. Roeser and Pendleton's No. 14-20 Morris-Buie, sand 1,598-1,615 feet, initial production 50 bbls., total depth 1,617 feet. T. K. Simmons' No. 7 B. C. Harvey, show of oil 1,648-50, 1,715-25 feet, initial production 260 bbls., total depth 1,775 feet. W. F. Snebold's No. 1 T. W. Lee, show of oil 877-96 feet, initial production 260 bbls., total depth 1,725 feet. Texas Consolidated Oil Co.'s No. 7-B Reynolds, dry and abandoned, total depth 1,255 feet.

Taylor County

N. E. Davenport's No. 1 Anderson, dry and abandoned, total depth 2,603 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Gray County

Empire Gas & Fuel Co.'s No. 1-B Webb, total depth 2,735 feet, plugged back to 2,249 feet, initial production 17,000,000 feet of gas, total depth 2,738 feet. Huffman Oil Co.'s No. 4 Finley, shot 400 quarts 2,960-3,008 feet, initial production 475 bbls., total depth 3,008 feet. LeFors Petroleum Co.'s No. 3 Davis, Shaw, total depth 3,050 feet, plugged back to 2,350 feet, initial production 4,000,000 feet of gas. Saulsbury Oil Co.'s No. 2 Carpenter, shot 80 quarts 2,695-2,730 feet, initial production 10 bbls., total depth 2,755 feet. Skelly Oil Co.'s No. 1 Bailey, total depth 2,906 feet, plugged back to 2,317 feet, initial production 17,000,000 feet of gas, total depth 2,906 feet. Texas Co.'s No. 2 Webb, shot 150 quarts 2,568-2,628 feet, initial production 120 bbls., total depth 2,640 feet. Anderson and Bean's No. 3 Thompson, pay 3,220-70 feet, initial production 150 bbls., total depth 3,277 feet. Danciger Oil & Refining Co.'s No. 1 Combs-Worley, top pay 2,925-30 feet, initial production 15 bbls., total depth 3,030 feet.

Dixon Creek Oil & Refining Co.'s No. 1 Barreet, shot 230 quarts 3,233-69 feet, initial production 385 bbls., total depth 3,279 feet. Skelly Oil Co.'s No. 4 Heaston, top pay 3,202-3,308 feet, initial production 85 bbls., total depth 3,308 feet; No. 14 Vicars, shot 290 quarts 3,198-3,290 feet, initial production 205 bbls., total depth 3,292 feet. Stanolind Oil & Gas Co.'s No. 3-C Cobb shot 270 quarts 3,207-3,315 feet, initial production 245 bbls., total depth 3,315 feet. Sun Oil Co.'s No. 5 Purviance, top pay 2,900-2,908 feet, initial production 710 bbls., total depth 2,941 feet. Texas Co.'s No. 3 Barrett, pay 3,120-35 feet, initial production 30 bbls., total depth 3,135 feet; No. 12 Cook-Faulkner, pay 2,885-95, 2,945-65 and 2,972-95 feet, initial production 390 bbls., total depth 3,003 feet. Tharp and Dawson's No. 1 Hood, shot 270 quarts 2,950-3,024 feet, initial production 108 bbls., total depth 3,032 feet.

Hutchinson County

Phillips Petroleum Co.'s No. 2 Cheatham (old well drilled deeper), old total depth 3,065 feet, new total depth 3,129 feet, plugged back to 3,109 feet, initial production 5 bbls.

Wheeler County

Bell Oil & Gas Co.'s No. 3 D'Spain, pay 2,455-65 feet, initial production 1,280 bbls., total depth 2,487 feet. Christie and Hickman's No. 2 D'Spain, top pay 2,447-77 feet, initial production 3,782 bbls., total depth 2,477 feet. Dumas Oil Co.'s No. 1 Bell, gas 1,811-2,015 feet, initial production 23,000,000 feet of gas, total depth 2,015 feet. Mid-Kansas Oil & Gas Co.'s No. 2 Huselby, pay 2,360-65, 2,460-75 feet, initial production 382 bbls., total depth 2,475 feet. Texas Co.'s No. 1 Keller, pay 2,508-28 feet, initial production 1,547 bbls., total depth 2,530 feet.

NEW GAS FIELD IN NEW YORK

WELLSVILLE, N. Y., July 14. — A new gas field in southern Allegany County was opened as an 8,200,000-foot well blew in about 7 miles south of here, near the Pennsylvania state line.

The well came in at 4,852 feet and was quickly capped. It was drilled by the Sinclair Refining Co. to provide fuel for its plant here.

IMPORTANT BOOKS
for the Oil Man's Library

"THE LAW OF OIL AND GAS"

Oil companies large enough to maintain their own legal departments, and attorneys whose clients include oil firms, will be interested in the fifth and permanent edition of Thornton's "The Law of Oil and Gas," which has just been published. Thirty years ago Judge W. W. Thornton, of the Superior Court of Indiana, started work on the first edition, and at this time "The Law of Oil and Gas" is accepted by courts and attorneys as ranking among the leaders on its subject. The new and permanent edition has been completely revised and rewritten by Judge Simeon S. Willis, of the Kentucky Court of Appeals.

The text is published in six volumes averaging about 550 pages each. The set includes a supplemental service so arranged that the reader is able to compare the original text and the supplemental matter with both open on the desk at the same time, thus avoiding the confusion and waste of time involved when one must turn pages to compare the text and the supplement. The supplemental service covers new decisions and also all changes in the statutory law.

Volume 1 discusses the legal status of oil and natural gas, oil and gas leases, and duration of lease. In Volume 2 are covered: forfeiture of lease; assignment and subletting lease; rents and royalties; who may make lease; tenants for years; tenancies for life—dower; co-tenants; contracts for a lease; adverse possession—statute of limitations; reservation and exception; lessor's remedy; lessee's remedy; Federal Leasing Act of 1920, and oil land decisions; mining partnerships; trust estate—joint associations and enterprises; drilling contracts; mechanic's liens; mortgage of oil or mining property.

Volume 3 covers: transportation and eminent domain; transportation of oil and gas; legislative and municipal control; gasoline; contracts for municipal lighting; monopolistic grants and contracts; streets and highways; municipality supplying gas; the gas company and consumer; meters and mixers; fixtures; nuisances; leaks and explosions; negligence in oil and gas operations; insurance; taxation; miscellaneous.

Volumes 4 and 5 present statutes and regulations for every state in the Union and also Ontario, Canada. Forms of leases, contracts, etc.; table of parallel section numbers; table of cases cited, and the index, are contained in Volume 6.

"The Law of Oil and Gas" may be purchased through the Book Department of The Oil and Gas Journal at the regular price of $45, express prepaid. The set will be forwarded promptly upon receipt of check or money order for that sum.

East Central Texas Wildcats

(Continued from Page 38)

FANNIN COUNTY

L. Kean et al's No. 1 L. M. Boyd, 900 ft. from E line and 200 ft. from N line of survey, W. Hunt Sur.
Drlg. 2,340 ft.

FRANKLIN COUNTY

Humble Oil & Ref. Co.'s No. 1 Merchants & Traders Bank, 1,000 ft. from S line and 1,500 ft. from E line of Fannie Davis tract, 5 miles SE of Talco, J. Askey Sur.
Set csg. 165 ft.

FREESTONE COUNTY

American Liberty Oil Co.'s No. 1 Trinity Farm Security Co., center of N and S lines and 466 ft. from E line of survey, J. B. Bonham Sur.
Rig up.

Burris' No. 1 R. J. Johnson, NE cor. of a 95.5-ac. tract, W. M. C. Jones Sur.
Location.

Clyde Creighton's No. 1 Holly Bros., 854 ft. from W and center N and S lines of lease, A.B.&M. Sur.
Drlg. 5,665 ft.

Gholson et al's No. 1 E. M. and C. H. Watson, 1,450 varas from N line and 1,150 varas from W line of survey, 6 miles NE of Fairfield, R. D. Price Sur.
Location.

Trinity Farm Co.'s No. 1 N. R. Stewart, 1,866 ft. SW from NE line and 923 ft. SE from NW line of 1,920-ac. tract, R. M. Williamson Sur.
Rigging up.

J. E. Wilburn's No. 1 S. McShan, 4,000 ft. from MWL and 5,000 ft. from NEL of survey, G. Diaz Sur.
Waiting on cmt. to set.

HENDERSON COUNTY

Big Bad Wolf Oil Co.'s No. 1 McCreary, 1,800 ft. from W line and 330 ft. from S line of survey, 6 miles S of Malakoff, W. H. Irvin Sur.
Derrick.

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malakoff and S of railroad, George Aldrick Sur.
Location.

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Grove, A. Caro Sur.
Rig up.

HUNT COUNTY

H. G. Waggoner et al's No. 1 Love (old well being drilled deeper), 300 ft. from N line and 650 ft. from W line of 95-ac. tract, John Gillaky Sur.
S.D. 3,666 ft.

G. S. & S. Co.'s No. 1 Oscar Popper, 3,670 varas from S line and 810 varas from E line of survey, 5 miles NW of Greenville, James Moore Sur.
Drlg. 910 ft.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 430 ft. from S line and 600 ft. from E line of Sur., 6½ miles NW of Elmo.
S.D. 500 ft.

LAMAR COUNTY

Cole et al's (formerly Optometrist Oil Club) No. 1 J. M. McFaddin, 450 ft. from S and W lines of E 25-ac. tract, 10 miles NW of Paris, Joseph Dick Sur.
S.D. 2,506 ft.

LEON COUNTY

Kellough and Tucker's No. 1 G. B. Young, 330 ft. from S line and 330 ft. from W line of 100-ac. tract, 4 miles SE of Long Lake, J. M. Boone Sur.
Moving in rig.

LIMESTONE COUNTY

Schultz' No. 1 Roy Ward, NE cor. of 73.8-ac. tract, 5 miles W of Mexia Field, Harrison York Sur.
Rebuilding rig.

MORRIS COUNTY

McGinnis et al's No. 1 Staggers, 800 ft. from S line of survey and 150 ft. from W line of lease, J. B. Nelson Sur.
Drlg. 3,050 ft.

NACOGDOCHES COUNTY

Livingston Oil Co.'s No. 1 C. B. Watkins 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Bailey Sur.
Drlg. water well.

J. W. Rich and others' No. 1-A R. W. Hazlewood, 5,450 ft. from S line and 3,800 ft. from W line of survey, 50 ft. N of No. 1, 15 miles SW of Nacogdoches Ewing Sur.
S.D. for surface csg.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE L of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
Drlg. 670 ft.

W. J. Keeling et al's No. 1 J. F. Rushing, 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
Derrick.

McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-ac. tract, 1 mile W of Dawson, William Moss Sur.
Drlg. 626 ft.

Wheelock and Collins' No. 1 I. N. Carf, 375 ft. from N line of lease and 1,050 ft. from W line of lease, James Smith Sur. No. 726.
Drlg. 4,215 ft.

RAINES COUNTY

J. W. Hallsell et al's No. 1 P. F. Jones, 400 ft. out of SW cor. of 22-ac. tract, 2½ miles S of Alba, B.B.B.&C. Sur.
Drlg. 4,054 ft.

RUSK COUNTY

George Hudson et al's No. 3 Jeff Phillips, 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaria Sur.
S.D. 3,616 ft.

SMITH COUNTY

Preston Rose et al's No. 1 Elisha Wiggins, 2,300 ft. from W line and 330 ft. from S line of 640-ac. tract, 2 miles SW of Winona, F. H. K. Day Sur., Abstract No. 285.
S.D. 4,528 ft.

UPSHUR COUNTY

Ben G. Barnett et al's No. 1 W. S. Jones, 200 ft. out of SW cor. of 100-ac. tract, 1½ miles NW of Jamestown, James N. Dunn Sur.
Bailed S.W. 3,700 ft.

Virgil Hodges et al's No. 1 J. M. Floyd, 320 ft. from NE cor. of 126-ac. tract, 4 miles N of Gladewater, Railroad Sur.
S.D. 2,750 ft.

Lanier and Moore's No. 1 Vaughan, 230 ft. from S line and 330 ft. from W line of 100-ac. tract, 2 miles NW of Big Sandy, C. W. Standifer Sur.
S.D. 1,042 ft.

Randerson et al's No. 1 Nid Minor, 600 ft. from NW line and 1,800 ft. from NE line of tract, D. R. Cannon Sur.
S.D. 3,891 ft.

VAN ZANDT COUNTY

Germany et al's No. 1 C. S. Coker, 150 ft. out of SW cor. 55-ac. tract, William Daniel Sur.
S.D. 1,208 ft.

Gillum and Allen et al's No. 1 A. T. Bass, 150 ft. from W line and 150 ft. from N line of 10-ac. tract, William Hart Sur.
Fishing 4,267 ft.

Isaac et al's No. 1 C. F. Darrell, 330 ft. from S and W lines of 53-ac. tract, C. E. River Sur.
T.D. 1,320 ft.

Markin & Evens' No. 1 L. M. Palmer, 850 ft. E of W line and 150 ft. N of S line of 69.8-ac. tract, one-tenth mile E of Pruitt, Nacogdoches County School Land Sur.
Drlg. 870 ft.

Miller et al's No. 1 J. M. Palmer, 150 ft. from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
T.D. 225 ft.

Peden and Olson's No. 1 J. M. Palmer, 200 S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
Spudded.

Pure Oil Co.'s No. 5 A. G. Maxfield, 1,578 feet N of S line and 250 ft. W of E line of the Maxfield 107.8-ac. tract, Nacogdoches County School Land Sur.
Making drill stem test; T.D. 2,994 ft.

Pure Oil Co.'s No. 2 A. D. Preston, 200 ft. S of N line and 200 ft. NE of SW line of A. D. Preston 9-ac. tract, Mund Gross Sur.
Location.

Pure Oil Co.'s No. 3 Frank Blackstock, 720 ft. S of N line and 665 ft. E of W line of Frank Blackstock 40-ac. tract, John Walling Sur.
Location.

Shell Pet. Corp.'s No. 4 B. M. Fowler, 224 ft. N of most southerly S line and 179 ft. W of E line, John Walling Sur.
Drlg. 815 ft.

Wheeler et al's No. 1 Cade, 180 ft. from S line and 150 ft. from E line of 20-ac. tract, Nacogdoches County School Land Sur.
S.D. 1,265 ft.

Peden and Olsen's No. 1 J. M. Palmer, 200 ft. from E and N lines of south 2 acres of 94-ac. tract, Nacogdoches County School Land Sur.
Bailed dry; got 70 ft. of oil in hole.

WOOD COUNTY

Alex Snyder et al's No. 1 T. Holmes, 200 ft. out of NE cor. of 122-ac. tract, 1½ miles SE of Hawkins, A. N. McKnight Sur. 399.
S.D. 3,615 ft.

West Texas Wildcats

(Continued from Page 37)

Landreth Prod. Co.'s No. 2-A Texas Pacific Land Trust, 441 ft. from N line and 440 ft. from W line of Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
Drlg. 3,450 ft.

Landreth Prod. Co.'s No. 1-B T. P. Land Trust, 2,200 ft. from the S line and 440 ft. from the W line of Sec. 3, Blk. 43, Twp. 1s, T.&P. Sur.
S.D. 3,962 ft.

Landreth Prod. Co.'s No. 1-C T.P. Land Trust, 440 ft. N and 440 ft. W of Sec. 11, Blk. 43, Twp. 1s, T.&P. Sur.
Moving in rig.

Landreth Prod. Co.'s No. 2 O. B. Holt, 660 ft. from S and E lines of Sec. 15, Blk. 43, Twp. 1n, T.&P. Sur.
Rig up.

Landreth Prod. Co.'s No. 1 Clarence Scharbauer, 660 ft. from S and E lines of Sec. 20, Blk. 44, Twp. 1n, T.&P. Sur.
Drlg. 3,720 ft.

Landreth Prod. Co.'s No. 1 O. B. Holt, 1,980 ft. from S line and 660 ft. from E line of Sec. 19, Blk. A, P.S.L. Sur.
1,100 ft. of oil in hole; T.D. 4,300 ft.

McCurdy et al's No. 1 Foster, 330 ft. from S line and 440 ft. from W line of Sec. 36, Blk. 43, Twp. 2s, T.&P. Sur.
Flowing 20 bbls. daily; T.D. 4,285 ft.

Moran Drlg. Co.'s No. 1 Smith, 330 ft. from N line, 330 ft. from W line of Sec. 12, Blk. 43, Twp. 1s, T.&P. Sur.
Cleaning out; swabbed 100 bbls. July 2.

Skelly Oil Co.'s No. 1 Connell, 1,650 ft. from N line and 440 ft. from E line of Sec. 11, Blk. 16, P.S.L. Sur.
Drlg. 3,615 ft.

Skelly Oil Co.'s No. 5-A University, 660 ft. from N and 1,980 ft. from E, Sec. 1, Blk. 35, University Sur.
Set casing; T.D. 3,305 ft.

Stanolind Oil & Gas Co.'s No. 4 E. F. Cowden, 1,900 ft. from S line and 660 ft. from W line, Sec. 36, Blk. 43, Twp. 2s, T.&P. Sur.
Moving in.

Sun Oil Co.'s No. 1 Wight, 2,200 ft. from S line, 440 ft. from W line, Sec. 2, Blk. 43, Twp. 1s, T.&P. Sur.
Location.

Texas Co.'s No. 10 W. E. Connell, 2,310 ft. from E line and 330 ft. from the S line of Sec. 1, Blk B-16, P.S.L. Sur.
Drlg. 1,800 ft.

Fred Turner's No. 2-A Addis, 2,310 ft. from N and 440 ft. from E of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
Cellar.

York-Harper et al's No. 1 Bates, 660 ft. from N and 660 ft. from E, Sec. 38, Blk. 44, Twp. 2s, T.&P. Sur.
S.D. 4,042 ft.

EDWARDS COUNTY

O. Houseman's No. 1 Turney, 1,650 ft. from N line and 330 ft. from W line of Sec. 176, C.C.S.D.&R.G.N.G. Sur.
T.D. 410 ft.; no report.

H. H. Sides' No. 1 Turney, 1,650 ft. from N line and 330 ft. from W line of Sec. 176, C.C.S.D.&R.G.N.G. Sur.
T.D. 500 ft.; no report.

FISHER COUNTY

E. T. Campbell et al's No. 1 W. R. Bishop, 570 ft. from S and 150 ft. from E of NW cor. of Sec. 18, Blk. 21, T.&P. Sur.
Moving in.

Condor Pet. Co.'s No 1 Herring, 450 ft. from S and 330 ft. from W line of Sec. 192, Blk. 1, B.B.B.&C. Sur.
T.D. 3,110 ft.; plugged back to 3,106 ft.; will treat with acid.

Condor Pet. Co.'s No. 2 Wilson, 640 ft. from N and 2,310 ft. from W line of Sec. 6, Blk. R. W. E. Richardson Sur.
Drlg. 1,500 ft.

Stanolind Oil & Gas Co.'s No. 5 Steele, 1,170 ft. from S and 990 ft. from W line of Sec. 210, Blk. 1, B.B.B.&C. Sur.
Set casing; T.D. 3,192 ft.

Texas Co.'s No. 2-B Teagarden, 990 ft. from S and 330 ft. E of NW cor. of S half of Sec. 9, Blk. 8, W. E. Richardson Sur.
Spudded.

Texas Co.'s No. 1 First National Bank of Rotan, 330 ft. N and E of the NW cor. of Sec. 210, B.B.B.&C. Sur.
Fishing 1,535 ft.

GLASSCOCK COUNTY

Continental Oil Co.'s No. 3 Hart Phillips, 1,050 ft. from N and 660 ft. from W, Sec. 24, Blk. 33, Twp. 2s, T.&P. Sur.
Hole abnd.; skidded rig 25 ft. N.

Steve Currie et al's No. 1 Underwood, 660 ft. from N line and 660 ft. from E line of Sec. 24, Blk. 3, Twp. 4s, T.&P. Sur.
Drlg. 615 ft.

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 23, Blk. 34, Twp. 2s, T.&P. Sur.
T.D. 3,045 ft.

John I. Moore's No. 1 Hubbard, 660 ft. from E line, 660 ft. from S line, Sec. 16, Blk. 34, Twp. 5s, T.&P. Sur.
Moving in.

Luce & Pickens' No. 1 Lee, 330 ft. from N and 330 ft. from W, Sec. 20, Blk. 33, Twp. 2s, T.&P. Sur.
Drlg. 1,216 ft.

Simms Oil Co.'s No. 2 W. P. Edwards, 330 ft. from S and 990 ft. from E of Sec. 18, Blk. 33, Twp. 2s, T.&P. Sur.
Drlg. 2,525 ft.

Tribal Oil Co.'s No. 5 M. M. Edwards, 330 ft. from S line and 990 ft. from the W line of Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur.
S.D. 2,452 ft.

HOWARD COUNTY

Continental Oil Co.'s No. 10 Settles, 330 ft. from N line, 1,650 ft. from W line, Sec. 133, Blk. 29, W.&N.W. Sur.
Cellar.

Eastland Oil Co.'s No. 1 Chalk, 2,310 ft. from S and 1,980 ft. from W, Sec. 125, Blk. 29, W.&N.W. Sur.
Drlg. 1,000 ft.

Fuglaar & Patterson's No. 1 Hyman, 330 ft. from S line and 330 ft. from W line of Sec. 89, Blk. 29, W.&N.W. Sur.
S.D. 700 ft.

Humble Oil & Ref. Co.'s No. 4 Settles, 330 ft. from S and 2,310 ft. from W, Sec. 132, Blk. 29, W.&N.W. Sur.
Drlg. 2,067 ft.

California Oil Co.'s No. 1 A. M. Bell, 465 ft. from W line and 1,915 ft. from E line of Sec. 12, Blk. 30, Twp. 1s, T.&P. Sur.
Drlg. 2,410 ft.

California Oil Co.'s No. 1 Dodge, 1,915 ft. from E line and 465 ft. from S line of Sec. 1, Blk. 30, T.&P. Sur.
Drlg. 1,800 ft.

Dorn et al's No. 1-B Davis, 2,310 ft. from N line and 2,310 ft. from W line of Sec. 2, Blk. 30, Twp. 1s, T.&P. Sur.
Drlg. 1,402 ft.

L. C. Harrison et al's No. 2 Texas Land & Mortgage Co., 2,310 ft. from E line and 330 ft. from the S line of Sec. 4, Blk. 30, Twp. 1s, T.&P. Sur.
Derrick.

Plymouth Oil Co.'s No. 11 Kloh, 1,320 ft. from S line and 660 ft. from W line of Sec. 5, Blk. 32, Twp. 2s, T.&P. Sur.
Drlg. 2,030 ft.

Permian Pacific Pet. Co.'s No. 1 Capps, 330 ft. from SW cor. of Sec. 17, Blk. 29, Twp. 1n, T.&P. Sur.
Location.

Phillips Pet. Co.'s No. 1 Davis, 990 ft. from E and 2,310 ft. from S line, Blk. 30, Twp. 1s, T.&P. Sur.
Location.

Joe Rusk et al's No. 2 G. M. Dodge, 330 ft. from the N line, 330 ft. from the E line, Sec. 9, Blk. 30, Twp. 1s, T.&P. Sur.
Moving in machine.

Sinclair Prairie Oil Co.'s No. 12 Dodge, 330 ft. from S line and 2,360 ft. from W line, Sec. 11, Blk. 30, Twp. 1s, T.&P. Sur.
Drlg. 2,537 ft.

Southern Oil Co.'s No. 1 Frazier, 660 ft. from S line and 660 ft. from W line of Sec. 4, Blk. 33, Twp. 1s, T.&P. Sur.
Drlg. 3,035 ft.

IRION COUNTY

S. E. Colgin's No. 1 Tankersley, 550 ft. from E of river and 150 ft. from S line of Sec. 723, H. J. Voelker Sur.
S.D. 1,358 ft.

Melrose Oil Co.'s No. 1 J. D. Sugg, 1,700 ft. from the E line and 308 ft. from the S line of Sec. 25, Blk. 2, H.&T.C. Sur.
Spudded and S.D.

Williams-Short's No. 1 Gentry, 2,200 ft. from N line and 2,080 ft. from W line of Sec. 1, Blk. 3, H.&T.C. Sur.
T.D. 1,340 ft.

JONES COUNTY

Clifton & Brazelton et al's No. 1 Cassey, 200 ft. from N and W lines of SE cor. of Sec. 15, Blk. 15, T.&P. Sur.
S.D. 800 ft.

Elmer Close et al's No. 1 A. B. Faulks, 330 ft. from N line and 330 ft. from W line of Subdiv. No. 27, Henry Millard Sur.
S.D. 1,970 ft.

Guthrie & Lancaster's No. 1-B Campbell, 330 ft. from N and 2,276 ft. from E line of Sec. 15, Blk. 19, T.&P. Sur.
S.D. 1,020 ft.

Southern Oil Corp.'s No. 2 Williams, 330 ft. from S and W line of Sec. 17, Blk. 19, T.&P. Sur.
Drlg. 2,508 ft.

LOVING COUNTY

R. L. Allen's No. 2 fee, 4,290 ft. from NE line, 990 ft. from SE line, Sec. 82, Blk. 33, H.&T.C. Sur.
Location.

R. L. Allen's No. 3 fee, 4,290 ft. from NE line, 990 ft. from NW line, Sec. 82, Blk. 33, H.&T.C. Sur.
Location.

R. L. Allen's No. 4 fee, 4,200 ft. from NE line, 330 ft. from NW line, Sec. 82, Blk. 33, H.&T.C. Sur.
Location.

Eppenauer Drlg. Co.'s No. 2 Hammill & Ellis, 410 ft. from NW and 796 ft. from NE lines of Sec. 2, Blk. 1, W.&N.W. Sur.
Cellar.

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 12, Blk. 57, Twp. 1, T.&P. Sur.
Rig up.

H. W. Martin's No. 4 Wheat, Ramsey, 990 ft. from SE and SW lines of Sec. 83, Blk. 1, W.&N.W. Sur.
Drlg. 3,230 ft.

J. F. Slack's No. 1 Covey, 2,310 ft. from NE line and 330 ft. from SE line of Sec. 3, Blk. 2, W.&N.W. Sur.
S.D. 2,200 ft.

PECOS COUNTY

California Oil Co.'s No. 7 Smith, Lease No. 1, 275 ft. from N and 1,094 ft. from E, Sec. 37, Blk. 194, G.C.&S.F. Sur.
Drlg. 1,201 ft.

Cardinal Oil Co.'s No. 17-E Tippett, 150 ft. from E line of W half and 730 ft. from N of No. 5-E, Sec. 40, Blk. 194, G.C.&S.F. Sur.
Waiting on orders; T.D. 481 ft.

Culberson Bros.' No. 15-B Monroe, 725 ft. from N line and 1,380 ft. from E line of Sec. 39, Blk. 194, G.C.&S.F. Sur.
Location.

Illinois Oil Co.'s No. 3 University, 330 ft. from E line and 960 ft. from S line, Sec. 31, Blk. 24, University Land Sur.
Drlg. 450 ft.

C. S. Messenger's No. 2 Rand Jones, 1,935 ft. from S line and 1,013 ft. from W line of Sec. 5, Blk. 9, H.&G.N. Sur.
Drlg. 500 ft.

Mid-Kansas Oil & Gas Co.'s No. 18 Smith-Taylor, 1,296 ft. from S line, 1,390 ft. from W line, Sec. 33, Blk. 194, G.C.&S.F. Sur.
Location.

Mid-Kansas Oil & Gas Co.'s No. 24 Smith-Taylor, 250 ft. W of S half of Turner tract No. 1, Sec. 33, Blk. 194, G.C.&S.F. Sur.
Road.

Mid-Kansas Oil & Gas Co.'s No. 25 Smith-Taylor, 344 ft. W of SE cor. of S half of Turner Tract No. 1, Sec. 33.
S.D. 750 ft.

Mid-Kansas Oil & Gas Co.'s No. 26 Smith-Taylor, 395 ft. S and 344 ft. E of SE cor. of S half of Tract No. 1.
Cellar.

Mid-Kansas Oil & Gas Co.'s No. 1 Turner, 250 ft. from N line and 250 ft. from W line of Turner Sur. No. 1.
S.D. 590 ft.

Mid-Kansas Oil & Gas Co.'s No. 12-H Yates, 408 ft. S of N line of Sec. 32 and 334 ft. W of SE cor. of S half of Tract No. 1.
Location.

Mid-Kansas Oil & Gas Co.'s No. 13-H Yates, 408 ft. S of N line of Sec. 32 and 344 ft. E of SE cor. of S half of Tract No. 1.
Location.

Mid-Kansas Oil & Gas Co.'s No. 27 Smith-Taylor, 194 ft. from N and 865 ft. from E of Sec. 33, Blk. 194, G.C.&S.F. Sur.
Drlg. 735 ft.

Mid-Kansas Oil & Gas Co.'s No. 35-B Yates, 1,619 ft. from N and 159 ft. from W of Sec. 61, Blk. 1, I.&G.N. Sur.
Drlg. 1,150 ft.

Mid-Kansas Oil & Gas Co.'s No. 38-A Yates, 250 ft. E and 205 ft. S from the NE cor. of Turner Tract No. 3 in Sec. 34½, I. G. Yates Sur.
Location.

Mid-Kansas Oil & Gas Co.'s No. 39-A Yates, 150 ft. N and 250 ft. W of the NW cor. of Turner tract No. 4, in Sec. 34½, I. G. Yates Sur.
Cellar.

Mid-Kansas Oil & Gas Co.'s No. 40-A Yates, 344 ft. from E line and 395 ft. from N of SE cor. of E half of Turner Tract No. 1.
S.D. 680 ft.

Tex-Mex Pet. Co.'s No. 1 Netterville, 5,610 ft. from S and 330 ft. from W of Sec. 59, Blk. 8, H.&G.N. Sur.
Drlg. 1,520 ft.

Trans-Texas Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 40, Twp. 9, T.&P. Sur.
S.D. 390 f..

REAGAN COUNTY

Big Lake Oil Co.'s No. 15-C University, Sec. 12, Blk. 2.
Drlg. 6,246 ft.

E. P. Kirschner and White's No. 1 W. A. White and McIntosh, 720 ft. from E and 800 ft. from N of Sec. 1,223, E.L.R.R. Sur.
S.D. 2,890 ft.

Skelly Oil Co. et al's No. 1-D H. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 32, Blk. 8, University Land Sur.
Moving in.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft. from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur.
Spudded.

Grisham & Hunter Corp.'s No. 1-A fee, 1,320 ft. from N line and 1,470 ft. from E line, Sec. 1, Blk. 60, Twp. 8, T.&P. Sur.
Drlg. 1,010 ft.

Hugo Freels' No. 1 B. Greenman, 330 ft. from NE line and 231 ft. from SE line of Sec. 21, Blk. 2, H.&G.N. Sur.
Shot 220 qts. from 3,778-3,980 ft.; no results; S.D.; T.D. 3,985 ft.

RUNNELS COUNTY

Agnew & Sons' No. 2 Fowler, 1,165 ft. from S and 150 ft. from W of NE cor. of Blk. 23, N. Travis Sur.
S.D. 2,559 ft.

Agnew and Currie's No. 1 H. E. Wade, 2,640 ft. from N line and 320 ft. from E line of Sec. 24, Domingo Diaz Sur. No. 532.
Prepare to start up; T.D. 33 ft.

Anderson et al's No. 1 W. F. James, 330 ft. from N and W lines of Subdiv. No. 20, Norvell Travis Sur.
Drlg. 1,400 ft.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,475 ft. from W line of survey, Willett Holmes Sur. No. 100.
T.D. 1,429 ft.

W. S. Sawyer et al's No. 1 Giesecke, 1,211 ft. from N and 4,606 ft. from E lines of survey, Blk. 131, James Hughes Sur.
Fishing 2,033 ft.

F. D. Williams' No. 1 J. L. Elkins, 2,225 ft. from E and 1,300 ft. N of SW cor. of Blk. 12, but in Blk. 13, N. Travis Sur. No. 533.
S.D. 1,400 ft.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur. (old well being drilled deeper).
Drlg. 5,681 ft.

Humble Oil & Ref. Co.'s No. 1 Ike Honig, 2,640 ft. from N line and 2,650 ft. from E line of Sec. 38, Blk. M, G.H.&S.A. Sur.
Moving in.

SCURRY COUNTY

Paul C. Teas' No. 1 Chapman, 660 ft. from S and 660 ft. from W, Sec. 100, Blk. 9, H.&T.C. Sur.
S.D. 654 ft.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
S.D. 5,635 ft.

TOM GREEN COUNTY

Southwest Exploration Co.'s No. 1 Bennett, 1,320 ft. from S and 1,320 ft. from W of Section 1,625, Behringer Sur.
Underreaming; T.D. 2,536 ft.

UPTON COUNTY

Broderick & Calvert's No. 1 Homer Trust & Savings Bank, 1,980 ft. from N line, 660 ft. from W line, Sec. 22, Blk. B-42, Twp. 4s. T.&P. Sur.
Drlg. 660 ft.

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
To run csg.; T.D. 10,681 ft.

Perry & Breeding's No. 1 Lane, 1,650 ft. from S line and 990 ft. from E line of Sec. 36, Blk. 1, M.K.&T. Sur.
Location.

Texas Pacific Coal & Oil Co. and Simms Oil Co.'s No. 4-D J. F. Lane, 990 ft. from S line and 1,650 ft. from W line, Sec. 36, Blk. L, M.K.&T. Sur.
Rig.

Theabotal Oil Co.'s No. 2 J. F. Lane, 1,650 ft. from N and 990 ft. from E of Sec. 36, Blk. 1, M.K.&T. Sur.
Drlg. 2,250 ft.

Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.
S.D. 1,995 ft.

WHEATLEY'S CHALLENGER PUMPING UNIT

All-Weather Protection—No Shed Necessary.

Designed and built to perform efficiently and to stand up, the economy and durability of the Wheatley Challenger has been proven in general use by leading companies throughout the Mid-Continent.

Direct drive from 35 h.p. Engine—V-drive or speed reduction unnecessary. Capacities from 70 bbls. at 750 lbs. to 126 bbls. at 450 lbs.
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VAL VERDE COUNTY

South-Western Exploration Co.'s No. 1 E. K. Fawcett, 2,310 ft. from S and 2,310 ft. from E, Sec. 14, Blk. L, G.C.&S.F. Sur.
Rig up.

WARD COUNTY

Atlantic Oil & Prod. Co.'s No. 3 Barrow, 2,310 ft. from NE line and 990 ft. from NW line of Sec. 23, Blk. 5, H.&T.C. Sur.
Drlg. 2,355 ft.

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 34, H.&T.C. Sur.
Drlg. 1,500 ft.

Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 551 ft. from NE line, Sec. 11, H.&T.C. Sur.
Location.

H. L. Randall et al's No. 1 Lee Monroe, 2,310 ft. from NE and 330 ft. from SE lines of Sec. 77, Blk. 34, H.&T.C. Sur.
Drlg. 1,725 ft.

California Oil Co.'s No. 8 York, 990 ft. from N and 2,310 ft. from SW of Sec. 10, Blk. 34, H.&T.C. Sur.
Drlg. 2,610 ft.

C. C. Duffey et al's No. 1 Llano-Sloan, 1,650 ft. from NW and NE lines of Sec. 24, H.&T.C. Sur.
Lost tools; to skid rig.

Eppenauer Drlg. Co.'s No. 1-B Combs, 438 ft. from SE and 1,826 ft. from SW, Blk. 4, J. W. Hollingsworth Sur.
Rigged up and S.D.

Farrell & Co.'s No. 4 Pure-Bennett, 990 ft. from NE and 1,650 ft. from SE, Sec. 16, Blk. 34, H.&T.C. Sur.
Cellar.

Farrell & Co.'s No. 3 John B. Bennett, 1,650 ft. from SE line, 330 ft. from NE line of Sec. 16, Blk. 34, H.&T.C. Sur.
T.D. 2,554 ft.

Gulf Prod. Co.'s No. 30 Hutchins, 990 ft. from S line and 330 ft. from W line of Sec. 4, Blk. F, G.M.M.B.&A. Sur.
Drlg. 2,550 ft.

Gulf Prod. Co.'s No. 47 O'Brien, 330 ft. from E and 990 ft. from S, Sec. 17, Blk. F, G.M.M.B.&A. Sur.
T.D. 2,615 ft.

Gulf Prod. Co.'s No. 48 O'Brien, 990 ft. from E line and 990 ft. from S line of Sec. 17, Blk. F, G.M.M.B.&A. Sur.
Drlg. 2,400 ft.

Postellio & Caprito's No. 1 Purcell, 330 ft. from NE and 990 ft. from NW, Sec. 17, Blk. 34, H.&T.C. Sur.
Rigged up and S.D.

Rector Oil Co.'s No. 1 Lee Monroe, 660 ft. from NE and 660 ft. from SE of Sec. 62, Blk. 33, H.&T.C. Sur.
S.D. 4,661 ft.

Sid Richardson's No. 1 Lee Monroe, beginning at the NE cor. of J. W. Hollingsworth Sur. No. 4, thence 440 ft. SE, thence NE 430 ft., J. W. Jackson Sur. No. 55.
Drlg. 1,019 ft.

Rogers & Graham's No. 1 J. C. Wells, 330 ft. from SE and 603 f.. from SW, Sec. 19, Blk. 34, H.&T.C. Sur.
Rig up.

Sageland Oil Corp.'s No. 2 Pure-Bennett, 1,650 ft. from NW and 2,310 ft. from SW, Sec. 16, Blk. 34, H.&T.C. Sur.
Rig up.

Sinclair Prairie Oil Co.'s No. 5 Archenhold, 2,310 ft. from SE and 2,310 ft. from SW of Sec. 23, Blk. 5, H.&T.C. Sur.
S.D. 3,060 ft.; swab ed 105 bbls. at 3,045 ft.

Tex-Mex Pet. Corp.'s No. 2-B Shell-Sloan, 2,310 ft. from NE and 990 ft. from NW, Sec. 16, Blk. 5, H.&T.C. Sur.
T.D. 2,595 ft.

WINKLER COUNTY

Magnolia Pet. Co.'s No. 6 Scarborough, 1,650 ft. from S line and 330 ft. from W line of Sec. 4, Blk. 22-C, P.S.L. Sur.
Drlg. 1,760 ft.

Magnolia Pet. Co.'s No. 7 Scarborough, 1,650 ft. from N line and 990 ft. from E line of Sec. 18, Blk. 7, P.S.L. Sur.
Drlg. 1,250 ft.

R. S. Mathews et al's No. 1 Evans, 1,320 ft. from N line and 1,320 ft. from W line, Sec. 46, Blk. 73, P.S.L. Sur.
Spudded and S.D.

Sid Richardson's No. 3-B W. D. Johnson, 330 ft. from SE and 2,310 ft. from SW, Sec. 22, Blk. 34, H.&T.C. Sur.
Location.

Sid Richardson's No. 1-H Scarborough, 2,310 ft. from E line and 650 ft. from S line of Sec. 4, Blk. C-22, P.S.L. Sur.
Location.

Sid Richardson's No. 5-A Scarborough, 330 ft. from W and 190 ft. from S, Sec. 1, Blk. 22-C, P.S.L. Sur.
Moving in machine.

Richardson's No. 6 Scarborough, 330 ft. from N line and 2,310 ft. from W line, Sec. 18, Blk. 174, P.S.L. Sur.
Set csg.; T.D. 2,539 ft.

Sinclair Prairie Oil Co.'s No. 3 W. F. Scarborough, 102 ft. from the N line, 1,650 ft. from E line, Sec. 1, Blk. 77, P.S.L. Sur.
Drlg. 2,450 ft.

Texas Panhandle Wildcats

Week Ending July 16

CARSON COUNTY

Empire Gas & Fuel Co.'s No. 1 C. S. Seiber, 1,326 ft. from E line, 330 ft. from S line of SE Sec. 10, Blk. 7, I.&G.N. Sur.
Drlg. 2,245 ft.

Hagy et al's No. 2 Bernard, C NE SE Sec. 44, Blk. 4, I.&G.N. Sur.
Location.

Hagy et al's No. 1 Sullivan, C NW Sec. 44, Blk. 4, I.&G.N. Sur.
Drlg. 2,000 ft.

Stanolind O. & G. Co.'s No. 2 L. C. McConnell, 330 ft. from N line, 330 ft. from W line, F½ SW Sec. 187, Blk. 3, I.&G.N. Sur.
Fishing 3,065 ft.

Texas Co.'s No. 2 E. Cooper, 330 ft. from S line, 330 ft. from W line, S½ Sec. 6, Blk. 9, I.&G.N. Sur.
Drlg. 3,110 ft.; showing oil and gas.

CHILDRESS COUNTY

Humble Oil & Ref. Co.'s No. 1 B. P. Smith, 1,327 ft. from S line and 1,327 ft. from E line of Sec. 27, H.&G.N. Sur., Blk. 9, Fishing 3,800 ft.; showed 420 ft. of S.W. on D.S. test at 3,780 ft.

DALLAM COUNTY

Eben Warner's No. 1 Jarb'e, 1,520 ft. from S line, 415 ft. from W line, Sec. 2, B.&B. Sur.
Fishing 3,200 ft.

GRAY COUNTY

Cambrian Oil Co.'s No. 2 L. H. Webb, 990 ft. from N line, 330 ft. from E line of E½ NE Sec. 62, Blk. 25, H.&G.N. Sur.
C.O. after shot; T.D. 2,655 ft.

Continental Oil Co.'s No. 8 Finley-Brown, 990 ft. from E, 330 ft. from S line, Sec. 32, Blk. B-2, H.&G.N. Sur.
C.O. 3,051 ft.

Champlin Ref. Co.'s No. 7-D J. McLaughlin, 990 ft. from W line, 330 ft. from N line of NE Sec. 33, H.&G.N. Sur., Blk. 2-B.
S.D. 3,120 ft.

Dixon Creek Oil Co.'s No. 1 Benedict, 330 ft. from S and 330 ft. from W, Sec. 114, Blk. 3, I.&G.N. Sur.
Fishing 2,202 ft.

Gulf Prod. Co.'s No. 5 Ellis Cockrell, 330 ft. from N and E lines, S½ Sec. 2, Blk. M-21, T.C.R.R. Sur.
Location.

Hoffman Oil Co.'s No. 1 D. M. Massey, 330 ft. from S line, 330 ft. from E line of 40-ac. of W 20-ac. of Sec. 41, H.&G.N. Sur., Blk. 25.
Spudded and S.D.

Johnson et al's No. 1 Thut, 330 ft. from N and 150 ft. S of S. A. Sweig.
Drlg. 1,650 ft.

Niapa Oil Corp.'s No. 1 Cole, 330 ft. from S and 330 ft. from W, Sec. 104, Blk. 3, I.&G.N. Sur.
Moving in.

Shell Pet. Corp.'s No. 2 B. E. Finley, 1,231 ft. from E line, 150 ft. from S line of N 479 acres of Sec. 17, B. E. Chaney Sur.
C.O. 3,098 ft.

Southwest Prod. Co.'s No. 1 T. Cobb, 1,320 ft. from S line, 990 ft. from E line, NE Sec. 184, Blk. 3, I.&G.N. Sur.
Drlg. 2,340 ft.

Stanolind O. & G. Co.'s No. 1-B W. E. Cobb, 330 ft. from N line, 330 ft. from E line of SW Sec. 165, Blk. 3, I.&G.N. Sur.
Put on pump 3,330 ft.

Texwell Oil Co.'s No. 1 J. C. McConnell, 330 ft. from S line, 330 ft. from W line, SW SW Sec. 174, Blk. 3, I.&G.N. Sur.
Drlg. 2,815 ft.

HUTCHINSON COUNTY

Badger Oil Co.'s No. 6 Lewis, 330 ft. from S line, 330 ft. from E line, SE Sec. 8, Blk. 25, B.S.&F. Sur.
Drlg. 2,255 ft.

Brownie Oil Co.'s No. 1 Ware, 330 ft. from N and 330 ft. from W, Sec. 124, Blk. 4, I.&G.N. Sur.
Fishing 1,182 ft.

Harry Stekol's No. 1-G J. A. Whittenburg, 330 ft. from W line, 990 ft. from N line, Sec. 89, G.C.&S.F. Sur., Blk. 3, but located in Hannah Prewitt Sur. No. 3.
C.O. 3,086 ft.

Huey et al's No. 1 Christian, 220 ft. from S and 330 ft. from W, Sec. 33, Blk. Y, A.&B. Sur.
Cellar.

Phillips Pet. Co.'s No. 3 A. Yake, 7,553 ft. from N line, 330 ft. from W line, Sec. 36, H.&T.C. Sur., Blk. 47.
Drlg. 1,800 ft.

Remo Oil Co.'s No. 1 Mankins, SW cor. SE SE Sec. 54, Blk. 13, H.&G.N. Sur.
Cellar.

Stanolind O. & G. Co.'s No. 4-C Ware, 330 ft. from N line, 1,650 ft. from W line, Sec. 20, Blk. M-21, T.C.R.R. Sur.
Location.

Texas Co.'s No. 1 W. E. Herring, 1,200 ft. from E line, 1,200 ft. from N line of W 1,594 acres of the E. Almaguire Sur.
S.D. 2,634 ft.

Trippiehorn Bros.' No. 2 R. C. Ware, 330 ft. from E line and 990 ft. from S line of E half NE Sec. 123, Blk. 4, I.&G.N. Sur.
C.O. after shot; T.D. 3,170 ft.

KNOX COUNTY

C. C. Christie's No. 1 Moore, Sec. 87, Blk. 45, H.&T.C. Sur.
Location.

MOORE COUNTY

Phillips Pet. Co.'s No. 2 J. C. Wilson, Sec. 157, Blk. T-3, T.&N.O. Sur.
Set csg.; T.D. 3,314 ft.

WHEELER COUNTY

Alma Pet. Co.'s No. 1-B Johnson, 330 ft. from N line, 330 ft. from W line, W½ NE Sec. 47, Blk. 25, H.&G.N. Sur.
S.D. 2,448 ft.

Bowers & Carvers' No. 1 L. B. Sims, 330 ft. from N line, 330 ft. from E line of SW SE Sec. 60, Blk. 17, H.&G.N. Sur.
Drlg. 1,350 ft.

Dyke Oil Co.'s No. 1 G. W. Sitter, 330 ft. from N line, 330 ft. from E line, N½ NW Sec. 28, Blk. 24, H.&G.N. Sur.
Drlg. 535 ft.

Johnson and Barrett's No. 1, NW cor. NE Sec. 24, Blk. 13, H.&G.N. Sur., 11 miles E and S of Shamrock.
Rig up.

Mid-Continent Pet. Corp.'s No. 6 J. S. Carwile, 990 ft. from N line, 990 ft. from E line of NE Sec. 51, H.&G.N. Sur., Blk. 24.
C.O. 2,348 ft.

Myers & Kennedy's No. 1 Harvey, 660 ft. from S and E lines of NW Sec. 67, Blk. 13, H.&G.N. Sur.
T.D. 2,285 ft.; to P.B.

Shell Pet. Corp.'s No. 1 Bush, 330 ft. from N line, 330 ft. from E line, N½ NE Sec. 48, Blk. 24, H.&G.N. Sur.
Pumped 235 bbls. in 6 hrs.; T.D. 2,943 ft.

Smith Bros.' No. 1 A. Plummer, 330 ft. from N line, 330 ft. from E line, N½ SW Sec. 45, Blk. 24, H.&G.N. Sur.
Drlg. 2,390 ft.

Spotlight Focused on Southwestern Zapata Test; Production Found for First Time in Mt. Selman

SAN ANTONIO, Tex., July 16.—Interest in Southwest Texas during the week was turned to the lower Laredo district and on R. B. Morrison's No. 1 Ramirez, in southwestern Zapata County. The spotlight was focused on this well as a result of finding production in the Mount Selman which is the first time this formation has paid off in the Laredo district and also the first time important production has been uncovered in the Mount Selman. Most production in the district is producing from the Jackson.

R. B. Morrison's No. 1 Y. and R. Ramirez, about 5 miles from the Starr County line and in Porcion 19, Share 20, topped sand at 2,042 feet and had 120 feet of unbroken sand section from 2,042-2,162 feet. The well came in good for 20,000,000 feet of gas with a shut in pressure of 575 pounds. It had sand from 2,041-64 feet, shale 2,064-69 feet, sand 2,069-86 feet, sand and shale 2,086-2,122 feet, shale 2,122-47 feet, and sand from 2,147-62 feet. This discovery will in all probability lead to much more drilling for this deep sand production. Top of the Mount Selman was reported encountered at 1,800 feet.

Bee County

Also of great importance during the week was the favorable indications for a good producer in the second well west of Tuleta in Bee County. Dirks Brothers' No. 1 Mrs. William Rapp, about 2 miles southwest of Tuleta and about 2,800 feet northeast of the Skinner No. 1, discovery, on a 15-minute drill stem test from 3,899-3,902 feet built up 50 pounds pressure and showed 200 feet of oil. The well is running about 22 feet lower than the discovery and has better possibilities for a much greater producer. At last report it was running casing and will probably be the middle of the week before plugs are drilled.

North Pettus Area

The North Pettus area, which includes parts of Karnes, Goliad, and Bee Counties, marked up three good producers during the past week and preparations were being made for the completion of another three additional wells. Houston Oil Co.'s No. 1-A Niehaus, a north offset to No. 1 Niehaus, bottomed hole at 3,647 feet and was completed for 5 bbls. per hour through one-half inch choke with 100 pounds working pressure. The well had sand from 3,642-47 feet, and set 7-inch casing at 3,642 feet. Houston Oil Co.'s No. 2-B Niehaus, in the E. Talley Survey, was completed for 280 bbls. daily through eleven-thirty-seconds inch choke and it showed a tubing pressure of 300 pounds and casing pressure of 425 pounds. It topped the Pettus sand at 3,647 feet and bottomed hole at 3,648 feet. The 7-inch casing was set at 3,638 feet.

Diamond Half Oil Co.'s No. 1 Runge State Bank, in Survey No. 26, showed promise of extending the field nearly a mile northeast during the week when on a drill stem test from 3,740-45 feet it showed 70 feet of oil and mud with one-quarter inch choke on bottom and five-sixteenths inch choke on top. At last report it was running casing. Magnolia Petroleum Co.'s No. 2 Scarborough, an east offset to Houston Oil Co.'s No. 1-B Neihaus, bottomed hole at 3,639 feet and was completed for 250 bbls. daily through twenty-three-sixty-fourths inch choke and showed 300 pounds pressure on casing. The 7-inch casing was set at 3,632 feet. Magnolia Petroleum Co.'s No. 4 Porter, a south offset to Sun's No. 1 Scarborough, was running tubing and will probably be completed early in the week. It bottomed hole at 3,670 feet. H. H. Weinert's No. 2 Grady Smith, 660 feet northeast of No. 1, was waiting on cement to set with total depth of 3,714 feet. On a nine-minute drill stem test it showed 250 feet of oil and mud at 3,652-3,714 feet.

About 3 miles west of Papalote and 4 miles south of Skidmore, in Bee County, Howeth & Swiger's No. 1 Marie Schramm Estate, on a 4,400-acre block in the Hugh O'Brien Survey, was drilling at 2,500 feet. On a drill stem test from 2,187-99 feet it showed five joints of salt water with an odor of gas. Heep Oil Co.'s No. 1 J. C. Wood, about 5 miles southeast of Beeville, was drilling at 5,613 feet. R. H. Feltner and others' No. 1 Theis, about 9 miles northwest of Beeville, was drilling at 1,100 feet. Phillips Petroleum Co.'s No. 1 Morgan, on a 13,930-acre block in the Eyles Survey, was shut down at 6,519 feet and heaving shale is reported to have filled the hole to 6,047 feet.

Duval County

In the Driscoll Pool in Duval County, Continental Oil Co.'s No. 2-A Clara Driscoll Sevier, second test for the deep production in the field, was coring for the Government Wells sand at 3,200 feet.

Jim Hogg County

North of production in the Guerra Field but across the line in Jim Hogg County, Sun Oil Co.'s No. 1-E Guerra & Sons has been abandoned as dry with total depth of 3,480 feet. It topped the Las Cuevitas sand dry at 2,560 feet, about 200 feet lower compared to the wells in the field. The Guerra Pool was put on production during the past week and is now on a temporary allowable of 495 bbls. daily. The field is over a year old and this is the first time it has been on production. It has 10 oil producers and 5 gas wells.

Starr County

In the Jeffries Lambeth area of Starr County, Weekley Oil Corp.'s No. 1 M. M. Garcia, about 1½ miles northeast of Weekley-McGinley's No. 1 Starr Co., has been abandoned as dry with total depth of 3,320 feet.

San Patricio County

In the Angelita area of San Patricio County, Circle W Oil Co.'s No. 1 Welder, northwest of the discovery and second well for the field, was reported flowing about 18 bbls. fluid daily with 30 per cent water. It was showing a tubing pressure of 1,550 pounds and casing pressure of 1,750 pounds. Total depth of the hole is 5,373 feet. Atkins-O'Neil and Continental's No. 2 Welder, two locations south of the above well, was drilling at 5,215 feet. Atkins-O'Neil and Continental's No. 1-A Welder was coring for the Angelita sand at 5,346 feet.

At Sinton in San Patricio County, Plymouth Oil Co.'s No. 2-A Welder, 1,320 feet due east of No. 1-A, bottomed hole at 5,548 feet and has since plugged back to 5,300 feet and will sidetrack and core the 5,400-foot sand where it showed 40 feet of gasoline with 600 pounds pressure in eight minutes on a drill stem test. Plymouth's No. 1-B Welder, about 3,500 feet northwest of No. 1-A, was drilling at 4,500 feet.

Southeast of Sinton, California Co. is reported to have recently taken about 400 acres in Section 54. Darby took 160 acres out of Sections 57 and 58, and Magnolia is reported to have taken over 300 acres out of Sections 54 and 57. Plymouth Oil Co. is reported on a deal for about 12,000 acres of the Welder ranch and to the northeast of its present holdings.

Webb County

In Webb County, Fidelity Exploration Co.'s No. 1 Soldivar, in Survey No. 657, was drilling below 1,680 feet. It cored gas sand from 1,295-1,300 feet which also showed some high gravity oil. If the operators fail to find production at lower depths it will probably plug back and test.

Bexar County

In Bexar County, A. M. Blume's No. 2 Louis Ridder, in the J. M. Baerera Survey No. 58, has been abandoned as dry with total depth of 1,630 feet. It had a show of oil in top of the Edwards at 1,600 feet. Base of chalk was drilled at 1,370 feet.

Bastrop County

Marts & Beavens' No. 1 Davenport, about a mile southeast of Elgin in Bastrop County, has been abandoned as dry at 2,600 feet in Serpentine.

Caldwell County

About 7 miles southeast of Lockhart, in Caldwell County, Wagner-Daniels & Stierene's No. 1 Blackwell, was drilling below 2,250 feet. It topped chalk at 1,900 feet. About 9 miles southeast of Lockhart and in the J. D. Raines Survey, Montevista Oil Co.'s No. 1 W. I. Pope was rigging up.

Keystone Royalties' No. 1 L. T. Burns, on a 7,000-acre block in the I. G. Belcher Survey, was shut down for repairs with total depth of 3,274 feet.

Luse and Cloyes' No. 2 Hagist, about 650 feet west of No. 1 in Section 265, Duval County, has been abandoned as dry at 2,202 feet. It had water sand from 2,160-2,202 feet. Sun Oil Co.'s No. 1 Moreno, about 5 miles south of San Diego and in Section 540, was drilling at 5,680 feet. It topped the Jackson at 4,940 feet.

Jim Wells County

In Jim Wells County, Magnolia Petroleum Co.'s No. 4 Seeligson, 1,420 feet from No. 3, was abandoned as dry at 3,258 feet. It had sand from 3,241-54 feet estimated good for about 12 bbls. daily.

Karnes County

About 4 miles north of the Pettus Field, G. A. Ray's No. 2 Radford, in the southeast corner of Karnes County, has been abandoned as dry with total depth of 3,865 feet.

Live Oak County

About 2½ miles east of the Jacob Pool in Live Oak County, G. C. Potter's No. 1 Jacobs, in Section 1, G.H.&H. Survey, was abandoned at 1,400 feet.

McMullen County

In McMullen County, C. C. Shumway's No. 6 Shiner, in the NE Section 62, of the Shumway Subdivision of the Shiner ranch, has been abandoned as dry with total depth of 2,077 feet.

Uvalde County

About 3 miles northeast of Uvalde in Uvalde County, Humble Oil & Refining Co.'s No. 1 R. L. Anderson in the J. J. Guerra Survey, was fishing with total depth at 2,663 feet.

Frio County

About 1½ miles east of Pearsall in Frio County, Gulf Production Co. is reported to have recently taken over 1,600 acres centering around the P. R. Ortiz Survey No. 1,411, T. H. Thompson Survey No. 2, B.S.&F. Survey No. 1 and R. Radditt Survey No. 6.

Wildcat Operations in Southwest Texas

Week Ending July 14

ATASCOSA COUNTY

J. R. B. Moore's No. 1 A. Riley, center of Blk. 2 of survey, or 6,300 ft. from S line and 3,500 ft. from E line of county in F. Anthony Sur.
T.D. 30 ft.; S.D.

BANDERA COUNTY

Parkford et al's No. 1 Mrs. R. L. Duke, G.H.&S.A. Sur., Sec. 7.
Material.

Peerless O. & G. Co.'s No. 1 Garrison Sur. No. 506, 1,500 ft. from N and 2,700 ft. from E lines of Sur. (8 mi. SW of Medina).
Set 500 ft. of 15½-in. csg.

BASTROP COUNTY

Marts & Beavens' No. 1 Davenport, 2,600 ft. NW line, 3,550 ft. SW line in Thos. Garratson Sur., 1 mile SE of Elgin.
T.D. 2,600 ft.; dry and abd.

N. Pennett's No. 1 Carroll, 330 ft. NW line, 990 ft. SW line of 40-ac. tract in Mays Sur.
S.O. 2,238-42 ft.; T.D. 2,260 ft.; shut in.

BEE COUNTY

Caesar Oil Co.'s No. 1 Pullin Est., F. Lewis Sur.
Rigging up.

Caesar Oil Co.'s No. 1 Ruckman, 330 ft. from S and W lines of E½ of Ruckman 150-ac. tract in Mancha Sur.
Drlg. shale 2,976 ft.

R. A. Davids' No. 1 Baptist Church, center of 3-ac. church lot, or 150 ft. E of N line of Pullin est., 27-ac. tract in F. Lewis Sur.
Rigging up.

Dirk Bros.' No. 1 Mrs. Wm. Rapp, 990 ft. E line, 1,650 ft. S line of SE Sec. 5, Uranga grant, 3,800 ft. NE of Skinner's No. 1.
T.D. 3,902 ft.; D.S. test 3,899-3,902 ft.; 15 min. 200 ft. oil, 50 lbs. pressure; setting csg.

Falvey et al's No. 1 Gardner, 330 ft. out of NE cor. of Gardner tract.
Location.

R. H. Feltner et al's No. 1 Theis, 2,376 ft. E line, 990 ft. S line of 1,034-ac. tract, or 3,640 ft. E line and 3,070 ft. N line of Caetno Rivers Sur.
Drlg. 1,100 ft.

Heep Oil Co.'s No. 1 J. C. Wood, 466 ft. from N and F lines of F. Crane Sur.
Drlg. 5,613 ft.

Howeth & Sivigers' No. 1 Marie Schramm est., 2,332 ft. from W line, 466 ft. from N line of the Schramm 150-ac. tract in Hugh O'Brien Sur. 4,400-ac. block.
T.D. 2,500 ft.; D.S. test 2,187-99 ft.; 5 joints S.W.; odor gas.

Elbert Jeanes' No. 1 G. L. Courtney, 1,600 ft. from E line, 330 ft. from S line of tract, G. A. Kerr Sur., 1½ miles NE of Pettus.
Rigging up and S.D.

Magnolia Pe. Co.'s No. 2 Scarborough, E offset to Houston's No. 1-B Neihaus.
T.D. 3,641 ft.; sand 3,634-41 ft.; est. 300 bbls.; comp. 250 bbls. daily; 23/64-in. choke.

McLain et al's No. 2 Laura Weiss, B.&B. Sur., 660 ft. E of No. 1.
T.D. 100 ft.; prep. to start up.

Phillips Pet. Co.'s No. 1 Morgan, 4,950 ft. from W, 3,270 ft. from N lines of 13,930-ac. tract, Eyles Sur.
T.D. 6,519 ft.; heaving shale; S.D.

Worth Oil Co.'s No. 1 Rutledge, 1,000 ft. from N line and 300 ft. from E line of A. Hadley Sur.
Spud.

BEXAR COUNTY

Berry-Hays et al's No. 1 City, 450 ft. N line and 750 ft. E line of 175-ac. tract.
T.D. 946 ft.; fishing.

A. M. Blume's No. 1 H. A. Ridder, E offset to Blune's No. 2 Ridder, J. M. Barrera Sur.
Derrick blew down; abd.

A. M. Blume's No. 2 Louis Ridder, approximately 2,350 ft. N of R.R., 700 ft. E of W line of J. M. Barrera Sur. No. 58.
T.D. 1,630 ft.; P.B. to test 1,430 ft.; abd.

A. M. Blume's No. 3 Ridder, 2,500 ft. S line, 3,500 ft. W line of SW cor. of Munroe Sur., in J. M. Barrera Sur.
Drlg. 440 ft.

J. G. Bowles' No. 1 Dillon, 750 ft. from road on E and 4,750 ft. from S line of survey, Manuel Delund Sur.
T.D. 1,182 ft.; fishing.

Dingman & Russell's No. 1 R. J. Coffey, 1,228 ft. from SE line, 1,086 ft. from SW line of 420-acre tract in Rodriguez Sur.
T.D. 1,326 ft.; P.B. 1,017 ft.; bailing.

Thos. Gorton's No. 1 Edward Jackel, 990 ft. from N line, 800 ft. from E line of tract in J. Ward Sur.
T.D. 500 ft.; S.D.

Fred A. Perrenot's No. 1 Russell, 750 varas from NE line, 54 varas from NW line of 500-ac. tract in Rodriguez Sur.
T.D. 1,315 ft.; standing.

C. A. Smith's No. 1 Henry Lamb, 750 ft.

(Continued on Next Page)

Southwest Texas Wildcats

(Continued from Preceding Page)

from N and E lines of Lamb farm, in de la Garza grant.
T.D. 982 ft.; show of oil and gas from 968-82 ft.; W.O.C.

CALDWELL COUNTY

S. S. Cargill's No. 2 Damereau, 150 ft. from W line, 460 ft. from N line of D. Cooper Sur.
Top Edwards 2,260 ft.; S.O.; T.D. 2,262 ft.

Wilford Keen et al's No. 1 Wm. Ewalk, 150 ft. from E line and 150 ft. from N line of 126-ac. trac., or 3,650 ft. from N and 1,300 ft. from E lines of Jas. George Sur. (3¼ mi. from Lockhart).
T.D. 2,228 ft.; S.D.

Montevista Oil Co.'s No. 1 W. I. Pope, 1,000 ft. from W line and 1,750 ft. from S line of J. D. Rains Sur., in I. Rains Sur.
Rigging up.

M. C. Moore's No. 1 Lackey, 440 ft. NW line, 150 ft. NE line of Lackey's 193.75-ac. tract, or 450 ft. NW line and 2,600 ft. NE line of Damon Sur.
Drlg. shale 1,100 ft.

Wagner, Daniels & Stierene's No. 1 S. M. Blackwell, 4,350 ft. SW line, 1,500 ft. SE line of tract and survey in John Roe Sur.
Drlg. shale 2,250 ft.

DEWITT COUNTY

Keystone Royalties' No. 1 L. T. Burns, 1,100 ft. from W and 600 ft. from S line of 303-ac. tract in L. G. Belcher Sur.
T.D. 3,274 ft.; S.D.

DUVAL COUNTY

Beer & Lewis' No. 1 Peters, Sur. 27.
Spud and S.D.

Buffalo-Texas Drlg. Synd., Inc.'s No. 1 Escobar, 700 varas from W line, 1,000 varas from N line of 930-ac. tract in Francisco grant.
Shale 3,217 ft.; S.D.

Dr. J. H. Butte et al's No. 1 Tom Graham, 1,122 ft. N line, 3,375 ft. W line, Sec. 572, E line of county and N line of San Diego.
Location.

Chiquita's No. 2 Richardson, 250 ft. N and W line of survey and block in Blk. 3, Sur. No. 3.
T.D. 1,716 ft.; S.D.

Continental Oil Co.'s No. 2-A Clara, Driscoll Sevier, 3,675 ft. S and 1,000 ft. from E line of Sec. 448.
Coring 3,200 ft.

Cox & Hamon's No. 1 State.
S.D. 400 ft.

Tom Graham and Texon Royalty's No. 1 Parr, 2,000 ft. from N line, 2,500 ft. from E line of Pointenant Sur. No. 185.
Drlg. 2,381 ft.

Frank Gravis' No. 1 Hubbard, 960 ft. S line, 330 ft. W line of B.S.&F. Sur. No. 83.
Rigging up.

Luse & Cloyes' No. 2 Hagist, 650 ft. W of No. 1 Hagist, Sec. 265.
T.D. 2,202 ft.; abd.

W. C. McBride's No. 1 Hagist, 330 ft. from N and E lines of SE 80 ac. of Sec. 1.
Rigging up.

O'Byrne & Jennings' No. 1 Benavides, 2,734 ft. from S cor. and 330 ft. from W line at right angles, Sur. 355.
Drlg. 310 ft.

Sun Oil Co.'s No. 1 Moreno, 330 ft. from E line and 2,000 ft. from S line of NW cor. of H.&W. Sur. 537, in Sec. 540 (5 mi. S of San Diego).
Drlg. 5,680 ft.

Witherspoon et al's No. 1, Richardson Sur. No. 5.
T.D. 1,005 ft.; S.D.

Louis Yeager's No. 1 Yeager, 694 ft. from W line, 1,527 ft. from S line of Sur. No. 38.
T.D. 865 ft.; S.D.

FRIO COUNTY

Amerada Pet. Co.'s No. 2 Halff & Oppenheimer, begin at most easterly N cor. of John H. Gibson Sur. No. 16, thence SE along NE line of Sur. 2,100 ft., thence SW at right angles 800 ft. (4 mi. SW of Pearsall).
T.D. 6,093 ft.; bailing little oil and sulphur wtr.

GILLESPIE COUNTY

Dorre et al's No. 3 Lindig.
Drlg. 283 ft.

Powers et al's No. 2 Lindig, 12,700 ft. from S line, 1,333 ft. from W line of Maria Josephine Guerrera Sur.
Location.

GOLIAD COUNTY

Duval Oil Corp.'s No. 1 Lucy Borden, 330 ft. NE cor. of 124-ac. tract in Alberto Guitteres Sur., 1½ miles W of Charco.
Location.

Jane Oil Co.'s No. 2 Grady Smith, 990 ft. SW lines of B.&B. Sur., 330 ft. SE line of Magnolia's 504-ac. tract.
T.D. 3,711 ft.; had odor oil 3,709-11 ft.

Jim Kendricks & J. M. O'Byrne et al's No. 1 Runge State Bank, 330 ft. from NW line and 330 ft. from SW line of 142-acre tract.
T.D. 3,745 ft.; S.D.

H. H. Weinert's No. 2 Grady Smith, 660 ft. NE of No. 1, B.&B. Sur.
T.D. 3,714 ft.; D.S. test 9 min., 3,652-3,-714 ft.; 350 ft. mud and oil; W.O.C.

Oceanic Pet. Co.'s No. 1 Fromme, 1,500 ft. S line, 1,200 ft. W line of 62-ac. tract in P. D. Dexter Sur., 10 miles N of Goliad.
Derrick.

GONZALES COUNTY

Weinert et al's No. 1 Aug. Kallis, in Aug. Kallis' 150-ac. tract, just over Guadalupe County line in Gonzales County, 2,450 ft. N of river and in center of tract in Ira Mash Sur.
Location.

GUADALUPE COUNTY

Diamond Half Oil Co.'s No. 1 E. A. Ball, 3,000 ft. NE line and 3,500 ft. SE line of L. H. Peters Sur., 8 miles SW of Pequin.
Drlg. shale 745 ft.

Hollifield's No. 1 Bailey, near Kingsbury.
T.D. 2,198 ft.; waiting orders.

HIDALGO COUNTY

D. D. Oil Co.'s No. 1 Mrs. L. George, 330 ft. from N and W lines of 40-ac. tract in Share 13, Porcion 41.
Location.

Davis & Harrison's No. 1 Lula George, 300 ft. from S and 700 ft. from E lines of Tract 13, Porcion 41, Ancient Jurisdiction of Reynosa.
T.D. 3,260 ft.; S.D.

Rogers et al's No. 1 Fairbanks, 7 miles S of McAllen.
Drlg. 160 ft.; no report.

Otto Woods' No. 1 John Lawrence, 530 ft. from W, 300 ft. from N line of Tract 274, Porcion 39, Ancient Jurdiction of Reynosa.
T.D. 2,063 f..; S.D.

Union Sulphur Co.'s No. 1 American Rio Grande L. & I. Co., 400 ft. S and W of NE cor. of Lot 229, Blk. 59 (½ mi. N of Mercedes).
Sandy shale and lime 6,431 ft.; S.D.

JIM HOGG COUNTY

Santa Clara's No. 1 W. W. Jones, 6,100 ft. from N line, 1,700 ft. from W line of Share 27, cor. of Blk. No. 111, in the Hino Jose grant.
Drlg. 1,885 ft.

W. G. French's No. 1 T. T. French, 5,700 ft. S line, 9,260 ft. W line of grant, or cor. of Blks. 67 and 68 in the Los Moritos grant.
Drlg. 1,100 ft.

Sun Oil Co.'s No. 1-E Guerra & Son, 9,500 ft. N of county line along the E line of W 2,000-ac. tract and 660 ft. at R/A.
T.D. 3,480 ft.; abd.

JIM WELLS COUNTY

Camp's No. 1 B. W. Irvens, 900 ft. from N and E lines of Sec. 11.
T.D. 800 ft.; S.D.

Plymouth Oil Co.'s No. 1 Cuero Cattle Co., 320 ft. from S and W lines of H.T.&B. Sur. No. 7, 2½ miles W from Alfred.
Rigging up.

Magnolia Pet. Co.'s No. 4 Seeligson, 1,320 ft. N line, 750 ft. W line of Sec. 216.
T.D. 3,528 ft.; abd.

KARNES COUNTY

Auld & Ricker's No. 1 Schaefer, 1,200 ft. from S line, 300 ft. from W line of N. Schaefer 447.5-ac. tract in A. W. Belvins Sur.
Location.

R. E. Ceveaux et al's No. 1 Tom Campbell, 330 ft. S and E cor. of farm and survey, J. R. Backer Sur., 12½ miles SW of Falls City.
Spud and S.D.

Harrison Oil Co.'s No. 1 Martin Schaefer, 330 ft. from SW line, 1,300 ft. from SE line of L.P.I.A.&M. Sur.
Moving in rig.

Houston Oil Co.'s No. 1-A Niehaus, N offset to No. 1 Niehaus.
T.D. 3,647 ft.; comp. 5 bbls., hr.; ½-in. choke, 100 lbs. W.P.

Houston Oil Co.'s No. 2-B Niehaus, 893 ft. from E line and 360 ft. from N line of lease.
T.D. 3,647 ft.; set 7-in. at 3,638 ft.; comp. 280 bbls. day; 11/32-in. choke.

G. A. Ray's No. 2 Radford, 4 miles N of Pettus Field.
T.D. 3,865 ft.; abd.

C. L. Webster's No. 1 J. B. Cannon, 1,140 ft. from N line, 250 ft. from E line of 80-ac. tract in Lambrano Sur.
T.D. 1,790 ft.; standing; may deepen to Yegua.

Martin's No. 1 Houston, Thomas Leople Sur. No. 761.
Top black shale 1,028 ft.; T.D. 1,985 ft.; to deepen.

KENDALL COUNTY

Pierce & Garvey's No. 2 D. Werner, 1,140 ft. E, 420 ft. S line of J. F. Perry Sur., 6½ miles N of Kendalia.
T.D. 400 ft.; S.D.

KERR COUNTY

Edmiston Oil Corp.'s No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439 of the H.E.&W.T. Sur.
Drlg. 675 ft.; no report.

Jeff Love and Eastland Oil Co.'s No. 5-E Jeff Love, 1,500 ft. SE of No. 1 and 1,580 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
Drlg. lime 1,300 ft.

G. F. Schreiner's No. 3 Love, 1,420 ft. from W line, 1,260 ft. from S line of Sur. No. 1,594.
Location.

KLEBERG COUNTY

J. S. Brown's No. 1 Antone Dietz, Sec. 7, Hotch estate.
Coring 2,920 ft.

Harry Clark's No. 1 V. J. Kivlin, 360 ft. from E line, 400 ft. from S line of Sec. 39, Blk. 8, Kleberg Town & Improvement Co. Sur.
T.D. 2,311 ft.; testing.

LEE COUNTY

Jas. E. Pederson's No. 1 Turner, David Hudson Sur.
Drlg. shale 4,820 ft.; no report.

H. A. Sheriack's No. 1 Otto, 736 ft. from NW line, 1,316 ft. from NE line of 57.5-ac. tract in Thomas Morrow Sur.
T.D. 1,495 ft.; S.D.

LIVE OAK COUNTY

J. H. Durbin's No. 3 Marbach, 1,850 ft. from W line and 450 ft. from S line of 428-ac. tract in Stephen Hays Sur.
Location.

Houston Oil Co.'s No. 25 Cartwright, J. Sandman Sur.
T.D. 5,258 ft.; prep. to complete.

Lion O. & R. Co.'s No. 1 P. E. McNeill, 1,-320 ft. from SW lines and 1,370 ft. from SE lines of Jane Curry Sur.
Location.

G. C. Potter's No. 1 Jacobs, 1,763 ft. N line, 2,445 ft. E line, Sec. 1, G.H.&H. Sur., 2½ miles E of Jacob Pool.
T.D. 1,400 ft.; abd.

Unity Pet. Co.'s No. 1 Terrill, begin at NE cor. of Reifert's 142-ac. tract, which is Blk. 7, go S along W line of survey 2,000 ft., thence E at R/A 316 ft. in C. Scanlon Sur.
S.D. 700 ft.

Witherspoon Oil Co.'s No. 3 Marbach, 330 ft. from NW line and 1,320 ft. from SW line of Subd. 15, 1,000 ft. N of No. 1, Jardin Sur.
Location.

Witherspoon Oil Co.'s No. 2 H. Clements, 100 ft. S of No. 1 junked hole, Eliz. Jordan Sur.
Cemented 7-in. csg. at 515 ft.; W.O.C.

Ike Taylor's No. 2 Griffith, 1,200 ft. from E line and 1,151 ft. from S line of lease in Tract 5, D. Osborne Sur.
Rigging up.

MAVERICK COUNTY

Stroman & Wright's No. 2 Debona, 440 varas E line, 280 varas S line of Sur. No. 1.
Drlg. shale 810 ft.

Ollie Wright's No. 1 L. Little, 500 ft. from N line, 3,800 f.. from E line of Potter Sur. No. 65 (10 mi. N of Eagle Pass).
Drlg. 825 ft.

McMULLEN COUNTY

Buford & Golightly's No. 1 Masuer, 760 ft. N line and 840 ft. E line of Sec. 22, H.T.&B. Sur., 5 miles W of Wentz.
T.D. 1,010 ft.; S.D.

Hall & Howard's No. 2 Lark, Scrugham Sur.
T.D. 1,074 ft.; testing.

Jane Oil Co.'s No. 2 Lark, 1,320 ft. N line of Survey and 150 ft. E of No. 1 in Seeligham Sur.
T.D. 1,032 ft.; testing.

Don Long's No. 1 Nueces Land & Livestock Co., Sec. 111.
Moving in rig.

C. C. Shumway's No. 6 Shiner, 2,310 ft. from N line and 330 ft. from E line of NE ¼ of Sec. 62 of the Shumway Subdivision of the Shiner Ranch.
T.D. 2,077 ft.; abd.

C. C. Shumway's No. 7 Shiner, 1,950 ft. from W line and 330 ft. from N line of Sec. 52, Location.

Texio Oil Co.'s No. 3 Jacobs, 5,293 ft. NE line and 330 ft. SE line of Benham Sur.
T.D. 937 ft.; S.D.

MEDINA COUNTY

Scoggins & Senders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E. Gage Sur. 395.
Drlg. 1,375 ft.

MENARD COUNTY

Duffey-Chedster's No. 1 Mears Wilkinson, 660 ft. S line and 660 ft. W line of T.&N.O. Sur., Sec. 23, Abstract 756.
Rigging up and S.D.

NUECES COUNTY

Clymore Prod., Inc.'s No. 4-A Ingram, 660 f.. S and E lines of Lot 5, Sec. 6, Peters Subd. No. 2.
Drlg. 2,300 ft.; no report.

Holliday et al's No. 1 Hutchins, 330 ft. from N line, 94 ft. from W line of 62-ac. lease.
T.D. 2,815 ft.; S.D.

Houston Oil Co.'s No. 2 W. W. Walton, 1,960 ft. from S line, 425 ft. from W line of Walton's 432-ac. tract.
T.D. 4,867 ft.; running liner and screen.

Midland Oil Co.'s No. 1 S. M. Noakes, start where road crosses river, thence 1,400 ft. S, thence 300 ft. W at R/A, in Gregoria Farias grant.
Drlg. 2,176 ft.

South Mineral Corp.'s No. 2 Ocher, 2,569 ft. from S line, 417 ft. from E line of 95-ac. tract in Sur. 418, Sec. 3.
Drlg. shale 4,550 ft.

Stanolind O. & G. Co.'s No. 2 Stratton, 1,980 ft. from N line, 660 ft. from W line of NE Sec. 12, De Abalo grant.
T.D. 682 ft.; W.O.C.

Texas Seaboard's No. 1 Ed Jurica, 150 ft. from NE line, 500 ft. from W line of Blk. 32.
Rigging up.

REAL COUNTY

H. J. Heartwell et al's No. 2 L. J. Haby, 694 ft. from W line and 2,152 ft. from S line of A.B.&M. Sur. No. 175.
Drlg. 2,838 ft.; cavey hole.

SAN PATRICIO COUNTY

Atkins-O'Neil and Continental's No. 2 Welder, 466 ft. from S and E lines of lease, Blk. 2, two locations S of Circle W Oil Co.'s No. 1 Welder.
Drlg. 5,215 ft.

Carpenter et al's No. 1 Sadler, 300 ft. each way out of SE cor. Blk. 1, Sec. 32, T. Perez Sur.
T.D. 5,056 ft.; S.D.

Continental and Atkins & O'Neil's No. 1-A Welder, 584 ft. from NE line, 466 ft. from SE line of Blk. 2, Hart Sur.
Coring 5,340 ft.

Heep Oil Co.'s No. 1 R. H. Welder, 300 ft. from N line, 467 ft. from W line of Welder 5.46-ac. tract.
Rigging up.

Heep Oil Corp's No. 2 R. Welder, 466 ft. from S line, 2,900 ft. from E line of Adeline Welder tract in Victor Loupsey Sur.
Drlg. 600 ft.

Heep Oil Co.'s No. 3 R. Welder, 3,000 ft. from E line and 9,920 ft. from S line of lease in Loupsey Sur.
Drlg. 800 ft.

Jane Oil Co.'s No. 1 Ragsdale Bros., Sec. 58, Geo. H. Paul Subd.
Drlg. 2,900 ft.

Josey Oil Co.'s No. 1 Welder, 1,500 ft. NW of Atkins & O'Neil and Continental Oil Co.'s No. 1 discovery well.
T.D. 6,017 ft.; P.B. to 5,100 ft.; drilled to 5,373 ft.; 18 bbls. fluid daily, 30% wtr.; tubing pressure 1,550 lbs.; csg. pressure 1,750 lbs.

J. C. Means' No. 1 C. C. Smith, 990 ft. from N line, 330 ft. from W line of survey, J. W. Pave Sur., 1¼ miles NE of Angelita.
Abd. location.

Petrol Corp.'s No. 1 R. H. Welder, 467 ft. from S and E lines of 300-ac. tract.
Drlg. 2,500 ft.

Plymouth Oil Co.'s No. 1-B Welder, 1,500 ft. NW of No. 1-A.
Drlg. 4,500 ft.

Plymouth Oil Co.'s No. 2-A Welder, 1,320 ft. due E of No. 1-A
T.D. 5,548 ft.; P.B. to 5,300 ft.

Stanolind O. & G. Co.'s No. 2 Stratton, 1 mile NE of No. 1, completed 2 yrs. ago.
Location.

STARR COUNTY

Chas. H. Andrews et al's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E line of Sec. 6 (NE part of county).
Drlg. 315 ft.

Jim Cloud, Inc.'s No. 1 J. Rodriquez, Share 35, Porcion 88, ancient jurisdiction of Camargo.
S.D. 160 ft.

Cooper & Andrews' No. 1 J. M. Martinez, SW cor. of Sec. 125.
Old well, to deepen; T.D. 3,200 ft.

Dean Bros.' No. 1 M. M. Garcia, 3,150 ft. from S line, 4,600 ft. from W line of Sur. No. 916
Drlg. 1,200 ft.

Great Plains Oil Co.'s No. 1 Sanches, 660 ft. from W line, 330 ft. from S line of SE NW of Sur. No. 344.
T.D. 3,905 ft.; S.D.

H. C. Harter's No. 1 Sanches et al, 530 ft. from N line and 450 ft. from W line of Share 72, Porcion 72.
T.D. 220 ft.; S.D.

Merle Gundy's No. 1 Block, NW of Sur. 167.
S.D. 250 ft.

Mitchell's No. 1 Kelsey-Bass, 150 ft. from N, 1,150 ft. from E lines of Share 5, Porcion 75, ancient jurisdiction of Camargo.
Location.

R. M. Mitchell's No. 1 Seabury, 4,000 ft. from N line, 150 ft. from E line of Share 5, in Per Sur. No. 75.
T.D. 210 ft.; S.D.

Smith-Tex Oil Co.'s No. 1 Starr County Cattle Co., 150 ft. from NW cor. N. ½ Blk. 24, Porcion 89.
Coring 2,500 ft.; no report.

Smith-Tex Oil Co.'s No. 2 Starr County Cattle Co., 150 ft. out of NW cor. of E ½ of Blk. 37, Porcion 89.
Drlg. 1,410 ft.; no report.

Weekly Oil Corp.'s No. 1 M. M. Garcia, 330 ft. from S, 330 ft. from W lines of Blk. 40, Tract 1, in N end of Porcion 99, ancient jurisdiction of Camargo.
T.D. 3,320 ft.; abd.

E. L. Younkin's No. 1 Kelsey Bass, 330 ft. from S line, 7 ft. from W line of Blk. 19, in Porcion 87.
Drlg. 610 ft.

TRAVIS COUNTY

Humble O. & R. Co.'s No. 1 P. C. Wells, 150 ft. NW line, 150 ft. NE line of farm, 185 ft. SW line and 1,000 ft. SE line of James P. Kemp Sur.
Drlg. 935 ft.; no report.

UVALDE COUNTY

Evans & Johnson's No. 1 Farris, J. Hammons Sur.
T.D. 1,093 ft.; S.D.

Lon Evans' No. 1 Stone, 2,566 ft. from N line and 1,473 ft. from E line of survey, 8½ miles NE of Uvalde, Kent. Sur. No 652.
T.D. 129 ft.; S.D.

Humble Oil & Ref. Co.'s No. 1 R. L. Anderson, 7,450 ft. SW of NE line and 9,100 ft. SE of NW line of J. J. Guerra Sur (3 mi. NE of Uvalde).
T.D. 2,663 ft.; fishing.

T. T. Word's No. 2 Trulove, 40 ft. N, 42 des. E of No. 1.
Drlg. lime 758 ft.

WEBB COUNTY

Fidelity Exploration Co.'s No. 1 Soldivar, 1,300 ft. from E line, 2,600 ft. from N line of Sur. 457.
T.D. 1,680 ft.; waiting orders.

Weekley Oil Corp.'s No. 1 R. Salvidor, 1,269 ft. from E line and 243 ft. from N line of Sec. 657, Borrego grant (SE part of county).
T.D. 657 ft.; S.D.

WILLACY COUNTY

W. W. Silk's No. 1 Stillman, Lot 16, Blk. 30, Santa Rosa Subd., Share 44.
Spud.

ZAPATA COUNTY

R. B. Morrison's No. 1 Y. and R. Ramirez, 330 ft. from NE line and 330 ft. from SE line of Blk. 4, Share 20, Porcion 19 (5 mi. from Starr County line).
T.D. 2,162 ft.; comp. 20,000,000 ft. gas; 575 lbs. shut in pressure.

E. V. & W. Oil Co.'s No. 1 Cuellar.
T.D. 1,125 ft.; S.D.

Muckelroy's No. 1 Flores, on NE line and 75 ft. from SE line of Lot 2, Blk. 30, Muckelroy Subd. of Porcion No. 37.
Derrick.

Joe Palmer's No. 11 S. Vela, 330 ft. from NE and SE lines of Blk. 170, Share 4 of L. Grillo grant (3 mi. E of Redondo Pool).
Rigging up.

Southwest Texas Proven

Week Ending July 14

NORTH DALE POOL—BASTROP COUNTY

Watt L. Saunders' No. 1 Harris, 1,100 ft. from SW line, 2,830 ft. from NW line of John Maximilian Sur. No. 22.
Top Austin 2,149 ft.; T.D. 2,338 ft.; S.D.

NORTH PETTUS FIELD—BEE COUNTY

Bryce McCandless' No. 1 Beeville Natl Bank, 330 ft. out of NW cor. of 142-ac. tract in G. B. Meyers Sur.
Building derrick and moving in rig.

Kemp Oil Co.'s No. 1 Weldon & Lackey, 1,694 ft. from NW line, 1,607 ft. from SW line of 1,000-ac. tract in J. Gomez Sur.
Derrick.

Magnolia Pet. Co.'s No. 4 Porter, 560 ft. W of No. 3 and offset to Sun's No. 1 Scarborough.
T.D. 3,670 ft.; running tubing.

Magnolia Pet. Co.'s No. 5 Porter, 330 ft. from S line of lease, 425 ft. from No. 4.
Drlg. 2,400 ft.

Magnolia Pet. Co.'s No. 6 Porter, 330 ft.

from S line of lease, 660 ft. E of No. 3. Location.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 2 Coreth, 300 ft. SE of Humble's No. 3 Coreth in A. Stafford Sur.
T.D. 1,055 ft.; set 6⅝-in. csg.; S.D.

J. F. Harrison's No. 4 F. Gembler, 150 ft. from NW line, 460 ft. from NE line of 88-ac. tract in J. Montez Sur.
T.D. 831 ft.; S.D.

EAGLE HILL POOL—DUVAL COUNTY

Cloyes and Alpha's No. 1 Hagist, 330 ft. from N and E lines of Blk. No. 10, in Sur. No. 265.
Drlg. 1,825 ft.

Shasta Oil Co.'s No. 3 J. R. Foster, 990 ft. from N line and 165 ft. from W line of 10-ac. tract in Sec. 206.
Moving in rig.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Harrison & Abercrombie's No. 1 Serna, 2,236 ft. from E line and 936 ft. from S line of Sec. 523.
Location.

Humble O. & R. Co.'s No. 29 White, 990 ft. from S line and 2,640 ft. from E line of Sur. No. 249.
T.D. 2,251 ft.; comp. 20 bbls. hr.

Humble O. & R. Co.'s No. 30 Paul White, 2,310 ft. from E line and 330 ft. from S line of Sur. No. 249.
T.D. 2,218 ft.; W.O.C.

Humble O. & R. Co.'s No. 31 Paul White, 3,630 ft. from E line and 990 ft. from S line of Sur. No. 249.
Location.

Humble O. & R. Co.'s No. 32 Paul White, 3,300 ft. from E line and 990 ft. from N line of Sur. No. 249.
Location.

Magnolia Pet. Co.'s No. 1 Duval County Ranch, 330 ft. N line and E line of Sur. No. 58.
Drlg. shale 3,485 ft.

Magnolia Pet. Co.'s No. 29 Duval, 1,650 ft. from W line, 2,310 ft. from S line, Sur. 208.
Location.

Magnolia Pet. Co.'s No. 1-C Hall, 990 ft. S line and 330 ft. E line of lease.
T.D. 2,373 ft.; swabbing.

Reynosa Oil Co.'s No. 7-D Duval Ranch, 330 ft. from N and W lines of 8⅛ 8¼ Sec. 362.
Drlg. 1,400 ft.

Russ et al's No. 4 E. Riley, 330 ft. from S line, 660 ft. from W line of SW NW Sec. 46.
Drlg. 1,520 ft.

Sun Oil Co.'s No. 33 Weiderkehr, 330 ft. from S line, 990 ft. from E line of Sur. No. 359.
Location.

Sun Oil Co.'s No. 62 Weiderkehr, 330 ft. from S line, 990 ft. from W line of Sec. 361.
T.D. 3,382 ft.; abd.

Sun Oil Co.'s No. 65 Weiderkehr, 660 ft. W of No. 64 and 660 ft. S of No. 60 in Sec. 359.
T.D. 41 ft.; W.O.C.

KINGSVILLE POOL—KLEBERG COUNTY

Ryals & Bartlett's No. 1 Flato, 150 ft. from N line, 30 ft. from W line of NE SE Sec. 40, of Kleberg Town & Improvement Co. Sur.
T.D. 985 ft.; S.D.

JACOB POOL—McMULLEN COUNTY

Kennon's No. 3 Lark, 660 ft. from N line, 330 ft. from E line of E½ of Blk. 15, Scrugham Sur.
T.D. 1,032 ft.; W.O.C.

Loma Oil Co.'s No. 27-A Jacob, 1,320 ft. N. 15 deg. E of No. 22.
T.D. 1,050 ft.; W.O.C.

Light Stephenson's No. 2 Lark, 150 ft. from S and W lines of Blk. No. 1, Lark Subd.
T.D. 1,045 ft.; comp. 15 bbls. daily.

Stewart-Smith & Storey's No. 1 L. Jacobs, 3,801 f.. due S of Texlo's No. 3 Jacobs, in John Fadden Sur. No. 8.
T.D. 864 ft.; W.O.C.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-C M. Guerra & Son, 1,320 ft. NE of No. 4-C La Sacatosa grant.
Location.

AGUA DULCE—NUECES COUNTY

Camp. et al's No. 2 King, 990 ft. S of N line, 330 ft. W of E line of Sec. 24, R. Garza Sur.
T.D. 6,021 ft.; P.B. to 5,455 ft.; testing.

Clymore Prod's No. 2-B J. C. Ingram, 660 ft. from E line, 500 ft. from N line, Sec. 9, Blk. 3, Peters Subd.
Location.

Clymore Prod.'s No. 3 Ingram, 660 ft. from E and S lines, Sec. 6, Blk. 6, Peters Subd.
Derrick.

Garland Clymore's No. 2-A Ollie Purl, 660 ft. from E line and 660 ft. from S line of Blk. 4, Sec. 6, Ross Peters Subd.
T.D. 4,804 ft.; W.O.C.

LOS OLMOS POOL—STARR COUNTY

Los Olmos O. & G. Co.'s No. 57 Kelsey Bass, 150 ft. from N line, 568 ft. from W line of SE SW Sec. 6, Porcions 75, 76 and 77.
T.D. 640 ft.; standing; depth corrected.

JENNINGS POOL—ZAPATA COUNTY

Texas Co.'s No. 47 Jennings, N 20 deg. 30 ft., E 275 ft. and 77 deg. 30 ft., E 95 ft. from No. 46.
Drlg. 1,214 ft.

CARTER'S REGIONAL OFFICES

PONCA CITY, Okla., July 16.—Carter Oil Co. is creating a new district at Ponca City to handle field operations in North Central Oklahoma and southern Kansas. The old district office at "Carter 9" near Shidler in Osage County is being transferred to the new division. The new area will extend as far south as Logan County.

Twenty families are moving to Ponca City this week, with more to be transferred before the end of the month. Present personnel of the firm includes W. B. Crutcher, division superintendent; B. M. McGraw of Guthrie, production superintendent; G. M. Yandell, division clerk; W. R. Scott and L. S. Windrow, district clerks; J. R. Miller, engineering clerk; John S. Chick, engineer; Harry Washburn, stenographer.

Brown Promises Speedier Prosecution of Violators

Russell Brown, compliance director for the oil code, has called for the continued co-operation of regional committeemen and has promised them full assistance in the prosecution of those cases in which facts are presented to warrant. The statement follows:

More than 300,000 Blue Eagle emblems for the petroleum industry are now in the hands of the regional state committees for distribution. Over 200,000 have been assigned to individual locations and should be delivered within the week.

The petroleum administrator, speaking for himself and the Department of Justice, has announced a vigorous enforcement of the code provisions.

Judge Amos L. Beaty, speaking for the Planning and Coordination Committee and the petroleum industry, has called upon all constructive forces in the industry to observe the code and support its enforcement. From the thousands of applications for the Blue Eagle emblem now coming to our offices, it is evident that these constructive forces are at work and that they will all be united for a drive against the destructive few who would stand in the way. The period of waiting for some one else to act, has given away to the realization that the compliance desired will come best from our own efforts.

I have been in personal contact with the code and governmental agencies for the past two months discussing the subject of enforcement and compliance. I have felt that it was of little use to write the industry of these matters until we were assured that we were to have the unreserved support of the necessary governmental agencies. To insure immediate improvement in code compliance, we now need only the addition of the voice of the industry itself. With some 8,000 members of the various regional, state and subcommittees of the Planning and Coordination Committee rests the responsibility and opportunity of joining with the Government in an effort to better compliance and enforcement. This effort is in your hands. The benefit of compliance results to you and to those whom you represent.

At this time, I desire to appeal to each and every committeeman and individual in the petroleum industry to do all in his power to encourage both enforcement and compliance, keeping in mind that compliance, like charity, begins at home.

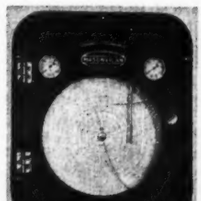
A means of enforcement, as applied to the obstinate violator, is suggested in the statement of the petroleum administrator to the effect that the widespread agencies of the Department of Justice would join hands with those of the Department of the Interior to expedite prosecution of violators of the petroleum code. If we can bring to the assistance of these governmental agencies the experience of our committeemen, every district attorney in the United States will become familiar wtih the disastrous effect on a great industry caused by the continued refusal on the part of a few to abide by the code. At the same time, we have the agencies of the oil administration to assist us in our efforts to obtain voluntary compliance through discussions and negotiations.

Every local committee throughout the United States should co-operate with the investigating and technical staffs of the Department of the Interior in bringing to the attention of the United States district atorneys cases on which prosecutions are felt to be necessary, and further, in obtaining and preparing proper evidence in support of these cases. We have assurance that delay will be minimized in the Washington offices.

Sometimes the secret is what to leave out . . .

FOR several years, Mason-Neilan engineers listened to refinery and gasoline plant operators tell what they *didn't* like about the flow instruments in use in their plants . . . and heard them ask, "Why doesn't Mason-Neilan build a flow controller that won't do *this?*"

Our development engineers spent months experimenting . . . finally produced the Mason-Neilan Compensated Flow Instruments which have concentric mercury chambers machined from 18-8 stainless steel that eliminate the possibility of rust or scum destroying their accuracy . . . make it easy to change ranges. They have drains that allow *all* mercury to be removed without effort . . . new frictionless grease seals and many other features which completely satisfy the most exacting petroleum industry requirements.



These flow instruments, like all other Mason-Neilan Regulators and Controllers, have been developed *in and for* the Oil Industry by engineers who know its needs and peculiarities. Specify Mason-Neilan Control Equipment for exact control of rate-of-flow, temperature and pressure.

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MONTREAL, CANADA, 620 Cathcart St.	Maurice Peiler, Mgr.
NEW YORK, 19 Rector St.	Rudolph B. Werey, Mgr.
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TULSA, 409 East Archer St.	Moorlane Co.

YOU CAN BE SURE OF MASON-NEILAN PRODUCTS

1035

North Louisiana Wildcats Prove Disappointments But They Will Be Carried to Deeper Horizons

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., July 16. — Two promising North Louisiana wildcats in widely separated areas proved disappointments when tested in the last week for the first expected pay sand. Both tests, however, are checking rather high at the present level and will be drilled deeper to the Woodbine horizon and possibly to the Trinity. L. M. Moffitt and others' No. 1 Antrim Lumber Co., Section 26-22-12, south of the Cartersville Field in the northern part of Bossier Parish, topped the Saratoga chalk at 2,191 feet and the Annona chalk at 2,420 feet. The base of the latter was logged at 2,536 feet. Three feet of sand showing some oil was cored from the top of the Blossom at 2,675-78 feet, but a drillstem test at this depth was dry. Another dry test was made from 3,124-44 feet and the test is coring ahead.

The contract calls for a 3,200-foot hole, but as it is located on a large block of some 17,000 acres, the test may be carried deeper. It is generally understood that if the present test is unsuccessful one or more other wells will be drilled on the block.

The second failure to get Blossom production was the Eastern Texas Production Co.'s No. 1 Given estate, Section 2-17-4, Lincoln Parish. The top of the Blossom was contacted at 3,035 feet and a drillstem test for 15 minutes from this depth to 3,052 feet developed 47 joints of salt water with no show of either oil or gas. On a previous drillstem test from 2,765-97 feet a slight show of gas was evident. This test is scheduled to drill to the Woodbine sand, and it is reported it will go to the Trinity if pay is not found in the upper horizons.

Getting Wildcat Play

A half dozen other parishes in the North Louisiana district are getting a good wildcat play. In the northwestern part of Webster Parish between Sarepta and Spring Hill, two tests have spudded in recently in an effort to extend oil or gas production over a wider area. M. J. Kissick, trustee, has set 10-inch surface casing at 270 feet on his No. 1 O. M. Slack, Section 18-23-10, a few miles southeast of the town of Spring Hill. South of the Kissick block, the Abney Oil Co. has assembled 1,500 acres adjoining several producing wells in the Sarepta Field. This company has set surface casing at 310 feet on its No. 3 B. L. Slack, Section 36-23-11, about one-fourth mile from production.

Interest in Bienville Parish continues to be manifested by three tentative wildcats, located on large blocks, on which drilling must begin within the next 60 days. The latest of these to be reported is G. E. Laskey and others, who have assembled 10,000 acres centering around Section 3-16-6w. The contract calls for a 3,000-foot test to begin by October 1. Walter George and others have a block assembled in the vicinity of Bienville with operations to begin within the next 30 days, and A. W. Baird has derrick up on his No. 1 Pardee, Section 27-14-6, in the vicinity of Saline.

Other North Louisiana wildcats follow: DeSoto Parish—Gaskill and others' No. 2 Jim Guy, Section 3-11-13, has been treated with acid at 1,735 feet and arrangements are being made to test. George LeGrand's No. 1 Fulmer, Section 1-11-16, plugged back from salt water at 2,255 feet to 1,965 feet and tested dry, and a shot at 1,155 feet developed nothing. E. T. Oakes' No. 1 Bryant, Section 30-13-15, a deep test near Longstreet on the western edge of the parish, is coring lime at 5,335 feet.

None of the Natchitoches or Red River Parish wildcats developed anything of interest during the past seven-day period. In the former a deep test in the Spanish Lake area, Plummer & McDaniel's No. 1 Walmsley, Section 45-10-8, is shut down for repairs at 4,600 feet, and in the Marthaville district. Roy Raines and others' No. 1 Raines estate, Section 28-9-10, is waiting on casing at 2,260 feet.

Ten New Locations

This district reported 10 new locations, three of which were wildcats, the remainder divided between proven oil and gas fields. On a block of approximately 20,000 acres in Rapides Parish, C. D. Loe, trustee, is rigging up on No. 1 Baird estate in Section 40-5n-1w. One new wildcat was reported from DeSoto Parish. Hester and others' No. 1 Alston, Section 11-11-16, is moving in rig. The gas area of Morehouse and Ouachita Parishes listed four new operations.

The 10 completions in North Louisiana resulted in four small oil wells, five dry holes and one gas well. The Bellevue shallow field in Bossier Parish is being reworked by a number of operators and it came back into the production column for the first time since the field was shut down three years ago. O. F. Shaver's No. 1 Elston, Section 10-19-11, is pumping 10 bbls. from 390 feet and the same operator's No. 3 Elston, same section, is a 15-bbl. pumper from 428 feet. Both wells are making salt water.

When the Bellevue Field was shut down several years ago, due to the low price of oil, the daily average production was 300 bbls., and it is doubtful if the present activity in that area will result in the field becoming a regular daily producer into pipe lines.

In the Blanchard Field, Caddo Parish, the Producers & Pyramid Oil & Gas Co.'s No. 1 Howard Hammock, Section 3-18-6, was completed from the shallow sand with an initial flow of 3,000,000 feet of gas from 906 feet. The other two oil producers were both from the Converse Field, Sabine Parish. Florence Oil Co.'s No. 1 McDonald, Section 16-9-13, is pumping 30 bbls. from 1,993 feet and Lawson-Leavell & Bryant's No. 1 Bank of Pleasant Hill, Section 29-9-13, is a 20-bbl. pumper from 2,000 feet.

Vernon Parish, supposedly in the vicinity of the Conroe-Jackson trend, reported another dry hole with the completion of Anderson & Kerr Drilling Co.'s No. 1 Nona Miller in Section 25-2n-9w. The well was abandoned at 4,094 feet. In DeSoto Parish R. E. Collins' No. 1 A. M. Thigpen, Section 29-15-12, was another wildcat duster, abandoned at 2,805 feet. Bossier Parish had two failures, one a shallow test northwest of the Bellevue Field and another in the Elm Grove area. The East Zwolle Field furnished another failure with the abandonment of Tarver & Bauer's No. 1 Barthold in Section 25-8-12.

ARKANSAS

The Urbana Field in Union County completed two oil wells for the only producers in the Arkansas district out of five completions. The Marine Oil Co.'s No. 3-E Thompson, Section 10-18-13, is pumping 95 bbls. daily from 3,535 feet and the McCresland Oil Co.'s No. 1-A Doty Normon, Section 3-18-13, is pumping 75 bbls. from 3,564 feet. A wildcat in this county, Bellevue Corp.'s No. 1 J. W. Greening, Section 30-18-15, contacted salt water sand and was abandoned at 3,010 feet. The top of the Nacatoch sand was logged in this test at 2,166 feet and the top of the Meakin at 2,547 feet. In Lafayette County, east of the Miller County Field, C. V. Lenz' No. 1 Foster, Section 9-15-25, was dry and abandoned at 3,242 feet. The Miller County Field reported a failure, Magnolia Petroleum Co.'s No. 3 Olivet, Section 4-16-26, salt water and abandoned at 2,959 feet.

Two other tests on the flanks of proven areas loom as small producers in South Arkansas. In Columbia County, O. F. Whittaker's No. 1 Hall, Section 10-15-20, is waiting on standard rig to pump after penetrating more than 20 feet of broken sand to a total depth of 2,138 feet. J. D. Reynolds' No. 1 Guttry, Section 21-15-19, Ouachita County, has 400 feet of oil in the hole at 1,506 feet and will rig up to pump.

Four new locations were staked in this district, two in the proven area of Miller County and two wildcats in as many counties. In Hempstead County, E. L. Austin's No. 1 McWilliams, Section 19-13-23, has set 10-inch surface casing at 140 feet, and the Arkansas Drilling Co., formerly listed as Clarco Oil Refining Co., No. 1 Jones, Section 11-14-24, is drilling at 150 feet. A Lee County wildcat, Arkansas-Louisiana Pipe Line Co.'s No. 1 McDonald, Section 28-1n-4e, is drilling in sandy shale at 2,730 feet.

It is expected that several tests, either rigging up or shut down for several weeks in the Miller and Lafayette County areas, will get under way within the next few days. Reports are that it is definitely assured that a second test will be drilled in the Bloomburg area, near the well which recently cored a likely looking sand and was junked after casing collapsed.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Haas & Stokes' No. 1 Lindstrum Land Co., 690 ft. S. 980 ft. E. NW cor. Sec. 34-1n-6e. Set 12-in. 40 ft.

BOSSIER PARISH

Bossier O. & G. Co.'s No. 1 Sherrill, 300 ft. S and W, NE cor. Sec. 13-9-12.
S.D.; W.O. 2,261 ft.

Ford & Hanover's No. 1 Cryer, 330 ft S and W. NE cor NW SW Sec. 25-19-12.
S.W. and abd. 875 ft.

Howard & Baird's No. 1 Gold, 150 ft. S and E. NW cor. Sec. 36-20-13.
S.D. for water 850 ft.

McKinney & Stewart's No. 1 Nattin, 470 ft. W. 620 ft. S. NE cor. Sec. 22-22-14.
S.D. 2,973 ft.

Moffitt et al's No. 1 Antrim, 330 ft. N and W. SE cor SW NE Sec. 26-22-12.
Coring 3,145 ft.

Producers O. & G. Co.'s No. 1 Werner, 660 ft. N and W. SE cor. Sec. 7-17-11.
S.D rep. rig 3,939 ft.

Producers O. & G. Co.'s No. 1 Leviston, 660 ft. N and W. SE cor. Sec. 13-16-12.
Dry and abd. 2,503 ft.

O. F. Shaver's No. 3 Elston, Sec. 10-19-11.
Pumping 10 bbls. at 428 ft.

CADDO PARISH

Ark.-La.-Tex. O. & G. Co.'s No. 1 Simon, 330 ft. N and E. SW cor. Sec. 15-20-15.
Tested S.W. 1,560 ft.

W. T. Bell et al's No. 1 Bostick, 1,320 ft. E. 660 ft. N. SW cor. Sec. 13-22-16.
Tested dry; W.O. 2,526 ft.

Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E. NW cor. NE SE Sec. 15-17-14.
S.D. 1,046 ft.; repairing rig.

Capitol O. & G. Co.'s No. 1 Noel Est., 300 ft. S and E. NW cor. NE Sec. 12-20-16.
Drlg. 400 ft.

A. D. King, tr.'s No. 1 Roach, 641 ft. E. 375 ft. N. SW cor. SE Sec. 4-14-16.
S.D. 2,128 ft.

Simplex Oil Co.'s No. 9 Youree-Randolph, 660 ft. S and W. NE cor. SE Sec. 13-20-15.
Tested dry 2,323 ft.; P.B. to 1,848 ft.

CALDWELL PARISH

Terrell & Price's No. 1 La. Central Lbr. Co., 300 ft. N. 300 ft. W. SE cor. NW NE Sec. 18-11-3e.
Hole clean, arrng. resume 2,355 ft.

DESOTO PARISH

L. H. Alderson's No. 1 Peek, SE cor. NW NE Sec. 25-11-13.
S.D. for wtr. 3,030 ft.

R. E. Collins' No. 1 Thigpen, 515 ft. N, 970 ft. E. SW cor. NW NE Sec. 29-15-13.
Dry and abnd 2,805 ft.

Dempsey & Manziel's No. 1 Thigpen, 375 ft. S. 330 ft. W, NE cor. SW NE Sec. 33-13-13.
S.D. for wtr. 1,605 ft.

Gaskill et al's No. 2 Guy, 370 ft. S and W, NE cor NW SE Sec. 3-11-13.
Used acid and testing 1,735 ft.

Hester et al's No. 1 Alston, 330 ft. S and W of center of Sec. 11-11-16.
Moving in rig.

Geo. M. LeGrande's No. 1 Fulmer, 200 ft. N and W SE cor. NW SW Sec. 1-11-16.
P.B. to 1,965 ft.; tested dry.

Texas Co's No. 13-A Wemple, Sec. 1-12-12.
Drlg. 2,381 ft.

J. S. Tuffree's No. 1 McGill, 450 ft. N, 150 ft. W, SE cor. SW SE Sec. 1-10-13.
S.D. 2,125 ft.

LINCOLN PARISH

Eastern Texas Prod. Co.'s No. 1 Givens Est., SW cor. NE Sec. 2-17-4.
Drlg. 3,100 ft.

MOREHOUSE PARISH

Grecian Bend Gas Co.'s No. 1 Patton, 759 ft. E. 177 ft. S NW cor. NE Sec. 11-20-4e.
Set 12½-in. csg. at 180 ft.; drlg. 1,600 ft.

Zeiger & Bacon's No. 1 Crossett, 400 ft. N. 300 ft. W. SE cor. Sec. 41-23-6e.
T.A. 3,111 ft.

NATCHITOCHES PARISH

Jack Let's No. 1 Brown Lbr. Co., 400 ft. S. 300 ft. E. NW cor. NE SW Sec. 27-9-13.
Set 10-in. 21 ft.

Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N. 330 ft. W. SE cor. Sec. 5-10-10.
Reaming to bottom 1,033 ft.

Plummer & McDaniel's No. 1 Walmsley, SE SW Sec. 45-10n-8w
S.D. for rep. 4,600 ft.

Roy A Raines et al's No. 1 Raines est., 330 ft. N and E. SW cor. Sec. 28-9-10.
W.O. casing 2,260 ft.

J. B. Storey's No. 1 W. W. Page est., NE cor. SE NW Sec. 18-8-9.
Arrng. to resume 1,480 ft.

OUACHITA PARISH

Ark.-La. P. L. Co.'s No. 10 Rea-Green, 1,775 ft. W, 35 ft. N, SE cor. SW Sec. 33-19-4e.
Set 6-in. csg. 2,158 ft.

Carbons Consolidated's No. 8 Guthrie, 1,550 ft. N 250 ft. W of SE cor. Sec. 22 in Sec. 50-20-4e.
Moving in rig

Carbons Consolidated's No. 4 Cole, 662 ft. S. 1,969 ft. W NE cor. Sec. 36-20-4e.
Tested S.W. 2,304 ft.

RED RIVER PARISH

Louis L. Glass' No. 1 Dickson, 400 ft. S and W. NE cor. NW SE Sec. 32-12-8.
S.D. 1,004 ft.

(Continued on Page 76)

Daily Average Production

Estimated daily gross production of all companies for week ending July 13:

NORTH LOUISIANA

Caddo, light	4,645
Caddo, heavy	1,510
Converse	1,715
Cotton Valley	535
DeSoto and Red River	1,485
Elm Grove	380
Haynesville	3,700
Holly	165
Homer	2,640
Pleasant Hill	210
Sarepta-Carterville	670
Urania	3,100
Zwolle	4,000
Total	24,835

SOUTH ARKANSAS

Champagnolle	1,270
El Dorado	2,450
Lisbon	365
Miller County	1,545
Nevada	935
Smackover, light	2,420
Smackover, heavy	19,835
Stephens	620
Urbana	2,370
Total	31,810

Big Increase in Production in Oklahoma Fields; Deep Sand Discovery in John Fitts Area

By JAMES McINTYRE

Aside from the large increase in crude oil production in Oklahoma in the past week, the jump having been from 500,435 bbls. per day to 551,060 bbls., an increase of 50,625 bbls., the principal events of the week were the extension of the Wilzetta Pool in Lincoln County, the deep sand oil discovery in the Fitts Pool in Pontotoc County, and the completion of the largest well the South Burbank Field has yet experienced. The Wilzetta Pool had been producing about 250 bbls. per day from the discovery well of the Stanolind and Amerada companies in the C NW NW SE Section 35-13-5. The same company's No. 1 James, NE NE SW Section 35, made 1,081 bbls. of oil and 325 bbls. of water initially from Hunton lime at 4,240-50 feet. Mid-Continent Petroleum Corp.'s No. 1 Ellis, SE SE NW Section 35, flowed 165 bbls. in six hours from Hunton lime at 4,243-57 feet.

In the Langston Pool, Logan County, the second well to drill to the first Wilcox sand, Mid-Continent Petroleum Corp. and Shaffer's No. 1 Moss, in Section 11-17-1w, flowed 497 bbls. on Saturday and 293 bbls. on Sunday, the oil coming up through 9-inch casing, and being produced through a 4-inch choke. The sand is at 5,104-24 feet. There does not appear to be enough gas to flow the well for any length of time. It started at less than 4,000,000 feet but fell off rapidly.

Mid-Continent Petroleum Corp.'s No. 1, C SE NE NE Section 25-5-4, in Pontotoc County, flowed 1,371 bbls. initially in 20 hours from Hunton lime at 2,340-45 feet and 1,135 bbls. in a later 24-hour test. Same company's No. 2, C SW NE NE Section 25, was drilling at 2,530 feet with nothing showing. It had Viola lime at 2,498 feet.

Daily Average Production

Estimated daily average production in the week ending July 14 and the preceding week was as follows:

Pool—	Barrels July 14	Barrels July 7
Allen	8,190	8,120
Blackwell district	5,000	4,900
Bristow-Slick	10,500	10,500
Cushing-Shamrock	14,500	14,500
Chandler district	6,600	6,600
Davenport	750	750
Healdton	9,180	9,150
Hewitt	4,950	4,950
Burbank	9,300	9,250
South Burbank	6,100	5,850
Balance of Osage	27,000	26,750
Lucien	5,890	5,825
Crescent	4,325	6,125
Marshall-Lovell	1,310	1,300
Bowlegs	12,085	9,410
Carr City	6,375	4,650
Earlsboro	9,935	9,435
East Earlsboro	11,655	10,275
South Earlsboro	1,355	1,055
Little River	16,060	12,325
East Little River	950	750
Seminole	12,570	10,790
East Seminole	1,470	1,120
Searight	2,560	2,335
Maud	1,190	1,060
Mission	4,060	3,090
St. Louis-Pearson	26,980	23,085
Cromwell	4,800	4,750
Papoose	1,300	1,300
Oklahoma City	210,030	178,590
Asher-West Asher	1,875	1,875
Tatums	6,500	6,730
Sholem-Alechem	4,460	4,475
Duncan	4,610	4,600
Tonkawa-Garber-Thomas	6,680	6,700
Fish	4,520	5,005
Konawa	2,080	2,045
Gray	2,100	1,545
Graham	3,800	3,750
Holdenville	3,465	3,355
Wewoka	4,400	4,350
Yale-Jennings	5,050	5,100
Other pools	63,580	62,315
Total	551,060	500,435

The Texas Co.'s No. 1 Voss, discovery well in the Polo Pool, Section 28-22-2w, Noble County, was still shut down waiting for the completion of the Stanolind Pipe Line Co.'s extension to the pool.

The test of Delaney and others in NE cor. Section 25-2-6, on the west side of the John Fitts area, proves that no well in the Fitts area may be called a test until it has penetrated all the sands in that area. What may be Wilcox sand was penetrated at 4,430-45 feet and the well flowed 322 bbls. in 24 hours. About 70 bbls. a day is coming from the Viola lime.

Osage County

On the east side of the old Burbank Pool, Osage County, Kewanee Oil & Gas Co. deepened its No. 8, SW SE SW Section 21-27-6, to the chat, 3,020-35 feet, total depth. It was dry and abandoned.

Carter Oil Co. and Empire Oil & Refining Co.'s No. 3 Higdon, NW NE Section 3-25-6, South Burbank Pool, found the Burbank sand at 2,757-2,807 feet, flowing 793 bbls. in 11 hours. It had not been completed.

The largest well to date for the South Burbank Pool is Carter Oil Co. and Peters Petroleum Co.'s No. 1 Cook, SE NE Section 9-25-6, which initialed 4,293 bbls. from Burbank sand at 2,690-2,720 feet. The well was completed at that depth.

A paradox to the above mentioned well was found in Carter Oil Co. and others' No. 1 Barritt, SW NW Section 11-25-6, which had no Burbank or Bartlesville sand and was dry and abandoned at 2,817 feet, total depth, in the Mississippi lime.

Another well in this pool to miss the producing sand was Champlin Refining Co.'s No. 6 Maker, NW NE NE Section 15-25-6. This well was drilled to the heat formation, topped at 2,925 feet and at 2,938 feet filled up 1,400 feet with oil. A test is to be made of production. This is a new producing horizon for this field.

In the Naval Reserve Pool, Lewis Production Co. and Continental Oil Co. completed their No. 4, SW SE Section 9-24-7, for 622 bbls. after a 90-quart shot. Sand was at 2,576-2,612 feet, total depth.

A. H. Kashishke's No. 11, NW NE NE Section 16-24-7, had sand at 2,560-61 feet and after a 100-quart shot swabbed 90 bbls. It had not been completed.

The Texas Co.'s No. 1, SE NW Section 12-23-7 (O.W.D.D.) flowed 192 bbls. in 17 hours from the Hominy sand, 2,867-70 feet, total depth. It was not a completion.

E. G. Todd's No. 7, NE SW SW Section 3-23-8, was a completion in the Skinner sand at 2,075-2,113 feet, after plugging back from 2,190 feet, total depth. It made 5 bbls. on the pump.

Barnsdall Oil Co.'s No. 16, SE NE SW SE Section 18-23-12, had Bartlesville sand at 1,632-65 feet and Tucker sand at 1,690-1,716 feet, total depth, producing 30 bbls. on the swab from both sands after each had been given a shot of nitroglycerin.

There were six new starts in Osage County during the week as follows: Carter Oil Co.'s No. 3 Walter Mosier, SE SW Section 34-26-6, location; Manahan Oil Co., Norbla Oil Co. and Gypsy Oil Co.'s No. 4 Ducotey, SE SW SW Section 3-25-6, location; Skelly Oil Co.'s No. 7 Ducotey, NE NW SW Section 3-25-6, rigging up; Schoenfeldt's No. 2-A, NE SE NW Section 22-24-8, location; C. F. Bissett's No. 1, SW SE SE NE Section 11-21-9, machine, and Clint Moore Estate's No. 1, NW SE Section 34-21-9, machine.

Northwestern Fields

In the Tonkawa Pool, Kay County, the Texas Co.'s No. 2 Smith, NE SW NW Section 29-25-1w, was drilling 19 feet in the Wilcox sand at 4,347 feet and showing water. A show of oil and gas was had in the chat at 4,140-50 feet.

The wildcat test of Acre and others, No. 1 Acre, C SW NE Section 14-24-11w, Alfalfa County, is again shut down with tools lost in the hole. Total depth is 6,460 feet.

The Texas Co.'s No. 1 Voss, SW NE SE Section 28-22-2w, Noble County wildcat and a Wilcox sand discovery, is still shut in waiting for tank room and a pipe line connection, there being no change from last week's report on the status of the well but it is expected to be going any day.

East of the Lucien Pool, Continental Oil Co.'s No. 1 Bennett, SE NW Section 19-20-1w, which had water in the first Wilcox sand, was coring ahead at 5,172 feet in green shale looking for the second Wilcox.

Lucien Pool, Noble County

In the Lucien Pool, Noble County, Shell and others' No. 4 Magney, C NW SW Section 17-20-2w, had plugged back to 5,160 feet from 5,276 feet, total depth, after failing to get the second Wilcox sand to respond with agitation. A 90-quar shot was given the first Wilcox sand at 5,146-60 feet, which yielded 25 bbls. on swab in 8 hours. They were drilling out plug.

The same companies' No. 3 Wolff, C SW NW Section 17-20-2w, was drilling at 5,344 feet in shale with 350 feet of water in the hole. Second Wilcox sand was based at 5,340 feet.

Shell Petroleum Corp. and others' No. 1 E. Farr, C NE NE Section 19-20-2w (O.W.D.D.), was completed for the second time when it produced 2,435 bbls. in 25 hours after being deepened from 5,144 feet to 5,154 feet, total depth.

The Carter Oil Co.'s No. 3 Weber, C NW SW Section 20-20-2w, topped the second Wilcox sand at 5,075 feet and was drilling ahead at 5,111 feet in sand. At the latter depth the well flowed 459 bbls. in 24 hours.

In the south end of the Lucien Pool, Gypsy Oil Co.'s No. 1 and No. 2 Verna were both showing for oil wells. The No. 1, C NE SE Section 29-20-2w, topped the first Wilcox sand at 4,945 feet and was being drilled ahead at 4,991 feet in sand, at which depth it was flowing 40 bbls. oil per hour by heads. The No. 2, C SE SE of same section, found the first Wilcox sand at 4,948 feet in which sand there was a show of oil. The second Wilcox sand was had at 5,067 feet and at 5,090 feet it flowed 58 bbls. It was drilling ahead at 5,110 feet.

Magnolia Petroleum Co.'s No. 1 Smith, C NE SW Section 29-20-2w, was the only completion in the Lucien Pool during the week. It started at 521 bbls. per day from the first and second Wilcox sands found at 5,006-44 and 5,113-5,206 feet, total depth. It was shot with 7 quarts.

Sinclair Prairie Oil & Gas Co. has a producer in No. 2 Bohn, C SW NE Section 29-20-2w. Sand was topped at 5,001 feet and penetrated to 5,041 feet, total depth, at which depth it flowed 242 bbls. in six hours. It was not completed.

There was only one new operation to start up in the Lucien Pool during the week, it being Shell Petroleum Corp. and

Wildcat Operations in Oklahoma

Week Ending July 17

NORTHERN OKLAHOMA

ALFALFA COUNTY

Acre et al's No. 1 Acre, C SW NE Sec. 14-24-11w.
T.D. 6,460 ft.; lost tools and S.D.

BECKHAM COUNTY

Price and Watchorn O. & G. Co.'s No. 1 Hoard, NE SW Sec. 17-8-26w.
Fishing 765 ft.

CADDO COUNTY

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w.
Fishing; T.D. 11,230 ft.

CLEVELAND COUNTY

Phillips Pet. Co. et al's No. 1 Baker, C SE NW Sec. 11-9-2w.
Drlg. 6,521 ft.

COAL COUNTY

Moore & Deaner's No. 1 Edward, NW NE SE Sec. 27-2-8.
S.D. 4,970 ft.

GARFIELD COUNTY

Ross Cummings et al's No. 1 Gage, SE NW Sec. 27-22-3w.
Spudded and S.D.

GRADY COUNTY

Mid-Western Oil Co., Inc.'s No. 1 Carter, NW NE SE Sec. 32-3-7w.
Drlg. 210 ft.

GRANT COUNTY

W. Earl Witt et al's No. 1 Patton, SW SE Sec. 19-29-3w.
Cellar and pits.

HARPER COUNTY

Sinclair Prairie Oil Co.'s No. 1 Neff, NW SE Sec. 21-26-24w.
Rigged up.

HUGHES COUNTY

Dickison et al's No. 1 Webster, NW NE Sec. 22-10-10.
Rig on ground.

J. B. Hill's No. 1-A Perkins, C W½ SW SW Sec. 7-5-9.
T.D. 1,075 ft.; S.D.

Olympic Oil Co.'s No. 1-A McClassen, SE NW NW Sec. 12-9-8.
Cromwell sand 3,433 ft.; T.D. 3,478 ft.; 37,000,000 ft. gas; est. 10 to 20 bbls. oil.

Olympic Oil Co.'s No. 1 McClassen, SE NW NW Sec. 12-9-8.
T.D. 600 ft.; lost tools; S.D.

Smith et al's No. 1 Farmer, SE NW Sec. 32-5-9.
Drlg. 495 ft.

KAY COUNTY

Carter Oil Co.'s No. 1 Cline, SE SW SE Sec. 16-28-5.
Drlg. 730 ft.

KINGFISHER COUNTY

Jadeka Dev. Co.'s No. 1 Frakes, C SW NE SW Sec. 16-15-6w.
T.D. 5,111 ft.; S.D.

KIOWA COUNTY

Bailey & Johnson's No. 1-A Potts, CEL NW NW SW Sec. 31-7-14w.
S.D. 250 ft.

LEFLORE COUNTY

East Okla. O. & G. Co.'s No. 1 Metcalf, SW cor. Sec. 2-4-26.
Drlg. 1,521 ft.

Murdock et al's No. 1 fee, SW NE SW Sec. 15-5-25e.
T.D. 2,425 ft.; drlg. by tools.

LINCOLN COUNTY

Harvey Newman Oil Co.'s No. 1 Rueb, C NW NE Sec. 23-15-5.
Cellar and location abnd.

Mid-Continental Oil Co.'s No. 1 Bolby, C SE SW Sec. 27-12-2.
Rig; waiting for rotary tools.

L. G. Hulse's No. 1 Sloan, SW NW SE Sec. 19-17-3.
Old T.D. 1,474 ft.; C.O. at 720 ft.

Texas Co.'s No. 1 Gessmann, SE NE Sec. 33-14-4.
Wilcox 4,999-5,002 ft.; H.F.W.; P.B. and ripped pipe around 3,800 ft.; 10 bbls. oil per hr. from Cleveland sand.

LOGAN COUNTY

W. N. Anthony's No. 1 Fruin, SE SW Sec. 4-16-1.
Cored 5,267-77 ft.; hard sandy dolomite.

McCLAIN COUNTY

Denver P. & R. Co.'s No. 1 Newburn, C SE SW Sec. 22-5-1.
Drlg. 5,976 ft.

NOBLE COUNTY

Continental Oil Co.'s No. 1 Bennett, SE NW Sec. 19-20-1w.
Drlg. 5,188 ft. in second Wilcox; hard sd.

Magnolia Pet. Co.'s No. 1 Crawford, SE NW Sec. 27-21-2.
Drlg. 3,100 ft.

Texas Co. et al's No. 1 Voss, SW NE SE Sec. 28-22-2w.
Wilcox 4,816-59 ft.; flowed 927 bbls. in 23 hrs.; T.D. 4,872 ft.; sandy dolomite; shut in.

Vaughn Dev. Co.'s No. 1 Louis, NE SE SW Sec. 16-22-1.
Building rig.

(Continued on Next Page)

others' No. 2 Moelling, C NW SE Section 17-20-2w, cellar and pits.

Logan County

In the Crescent Pool of Logan County, Gypsy Oil Co. and Carter Oil Co. have recompleted their No. 1 Good, C SW NW Section 27-17-4w. This well was deepened from 6,290 feet, old total depth, to 6,306 feet with no increase in production. Lime was found at 6,290-94 feet, broken lime at 6,294-97 feet and white sand at 6,297-6,306 feet, total depth.

The Eason Oil Co. was building rig on No. 2 Katscher No. 1, C NW NE SW Section 34-17-4w, and was drilling at 3,617 feet in No. 3, Katscher No. 2, C NW SW SW of same section. Both of these wells are on 10-acre locations and are the exceptions for well spacing in this field.

In the Langston Pool of Logan County, Mid-Continent Petroleum Corp.'s No. 1 Moss, SW SE Section 11-17-1w, offsetting the discovery well, flowed 395 bbls. of oil in 15 hours by heads from sand at 5,104-24 feet, total depth. Earlier this well blew off connections and it was necessary to install new connections.

South of the town of Coyle, W. N. Anthony's No. 1 Fruin-Eckman, a wildcat in the SE SW Section 4-16-1e, had cored salty tasting sandy dolomite formation from 5,231 to 5,266 feet, smelling of oil and gas. A core from 5,267 to 5,277 feet showed that it had penetrated the second Wilcox sand, top unknown. It was coring ahead at 5,277 feet.

Creek County

Creek County came through during the past week with several completions and new starts. The Texas Co.'s No. 2 Jackson, NE SW NW Section 25-19-8, had the Red Fork sand at 2,356-77 feet, total depth, and swabbed 37 bbls. after a 24-quart shot. It was completed.

Regal Oil Co. and Bert Swift's No. 1-B Hall, SE SW SE Section 4-19-9, was dry and abandoned at 2,046 feet, total depth in shale. Bartlesville sand from 2,020-37 feet had a small show of oil.

North of the Olive Pool, Wood Oil Co. completed their No. 3 Grayson, SW NE NE Section 3-18-8, for 50 bbls. on swab after a 100-quart shot had been given the Red Fork sand at 2,542-64 feet, total depth.

In the Olive Pool, L. B. Jackson's No. 4 Brown, CSL NW SE Section 27-18-8, made 20 bbls. from the Layton sand at 1,291-1,361 feet, total depth. Production came after a 100-quart shot. It was a completion.

E. B. George abandoned location and cellar for his No. 1 Lee, SW SE SW Section 33-18-8.

In the south end of the Olive Pool, J. E. Crosbie's No. 4 Casey, SW NW SE (corrected location), Section 3-17-8, was completed in the Layton sand from 1,315 to 1,349 feet, total depth, when it swabbed and flowed 75 bbls. in 24 hours.

C. W. Titus' No. 1-B Casey "B," (formerly reported as No. 1 Tiger) NE SW Section 3-17-8, was completed for 296 bbls. on swab and flow after a 130-quart shot was given the Layton sand at 1,355 85 feet, total depth.

E. J. Jordan's No. 4 Bishop, C SW SW Section 13-17-8, southeast of the Olive Pool, made 6 bbls. on swab. Production was from the Prue sand at 2,258-98 feet, total depth.

In the northeast corner of the county Midco Oil Co. got a Red Fork sand producer in their No. 6 Land, SE NW Section 12-18-11. Sand was logged from 1,408-27 feet, total depth being 1,435 feet in shale. It was completed at that depth.

Offsetting the Midco Oil Co.'s well, Spartan Investment Co.'s No. 11 Lee, SW NE of 12-18-11 was a dry hole at 1,420 feet, total depth. Sand was missing.

Haulburt and others have abandoned their No. 4 George, CWL NE SE Section 23-18-11. It had been spudded in.

Caprock Oil Co.'s No. 1 Brown, SW NW SW Section 16-17-10, had Layton sand at 1,020-33 feet, dry; Red Fork sand 2,112-19 feet, 1,500,000 feet of gas; Mississippi lime 2,692-2,700 feet, total depth. It was dry and abandoned.

Carpenter and others' No. 1 Tiger, SW NW SW Section 27-17-11, was dry and abandoned after penetrating Glenn sand at 1,730-1,897 feet, hole full of water; Dutcher sand at 2,168-2,214 feet, dry; total depth was 2,282 feet, one foot in the Mississippi lime.

Phillips Petroleum Co.'s No. 7 Charles, SW SE Section 25-15-7, was completed for 112 bbls. after a 15-quart shot in the first and second Wilcox sands at 3,730-33 and 3,751-81 feet, total depth. It carried a small amount of water.

Devonian Oil Co.'s No. 1 Smith, NE SW Section 36-15-7, logged the Wilcox sand at 3,738-62 feet, total depth, which was good for 65 bbls. on swab after plugging back to 3,758 feet to obtain a water shut-off. It was completed.

In the Bristow Field, Bryan Petroleum Co. completed No. 3 Wilson, NW SE NE Section 21-15-8, for 110 bbls. on swab and flow. Bartlesville sand was tagged at 2,859-70 feet, total depth.

Sinclair Prairie Oil & Gas Co.'s No. 4 White, SW NE NW Section 11-14-8 (O. W.D.D.) was abandoned at 2,920 feet, total depth. Bartlesville sand at 2,800 to 2,920 feet carried a hole full of water.

First reports for the county included the following: Big Four Petroleum Co.'s No. 2 McIntosh, SE SW SW Section 34-19-8, spudding; Sherry and others' No. 3 Harmon, SE NE Section 28-19-9, rigging up; Gled Oil Co.'s No. 9 Escoe, CNL SW SE Section 27-18-8, machine; O. M. Ireland's No. 1 Willis, NW SW NE Section 11-18-9, drilling 265 feet; J. E. Crosbie's No. 5 Casey, NE NW SE Section 3-17-8, location; C. W. Titus, No. 4 Casey, NW SW SE Section 3-17-8, rigging up; Bay State Oil Co.'s No. 1-A Lasley, SE cor. Section 4-17-8, cellar; Doke & Hughes' No. 4 Watson, NW cor. Section 10-17-8, rig and tools; Strozier and Murta's No. 1 Newton, NE NW NW Section 35-17-11, drilling 1,160 feet.

Lincoln County

Stanolind Oil & Gas Co. and Amerada Petroleum Corp. have abandoned location for No. 5 Brill, SE NE NE Section 11-14-3e, Chandler Pool of Lincoln County.

Coline Oil Co.'s No. 3 Telford, SE NE SE Section 7-14-4, was completed for 180 bbls. on the pump in the Wilcox sand from 5,008-15 feet, total depth after the dolomite carried a hole full of water at 4,935-68 feet.

The Texas Co.'s No. 1 Gassman, SE NE Section 33-14-4, wildcat test southeast of the Chandler Pool, is showing for a producer since it was plugged back from a total depth of 5,002 feet, 12 feet in the Wilcox sand which carried a hole full of water. Casing was ripped around 3,800 feet and it made 10 bbls. an hour between the pipe. Production is believed to be coming from the Cleveland sand.

Amerada Petroleum Corp. and Stanolind Oil & Gas Co. have finally completed their No. 1 James, NE SW Section 35-13-5, offsetting the discovery well in the Wilzetta Pool. They quit this one at 4,309 feet, total depth, 63 feet in the Hunton lime at which depth it produced oil and water. It was plugged back to 4,2[illegible] feet, acidized with 1,000 gallons and the last gauge available was 844 bbls. of oil and 1,400 bbls. of water on gas lift. It will be recalled that the discovery well was drilled to the Wilcox sand which carried a hole full of water and was then plugged back to the Hunton lime to produce around 600 bbls. of oil and 18[illegible] bbls. of water.

This new spot registered another completion in Mid-Continent Petroleum Corp.'s No. 1 Ellis, SE NW Section 35-13-5, which flowed 600 bbls. in 4 hours, cutting 22 per cent. Hunton lime was at 4,243-57 feet, total depth. A later gauge was: flowed 585 bbls. of oil and 540 bbls. of water in 21½ hours.

Oklahoma County

In the Oklahoma City Field, Oklahoma County, Aboco Oil Co. abandoned No. 1 Baskin, SE NE NW NW Section 2-11-3w, total depth 2,360 feet.

Larkin & Warr's No. 1 Carney, SE SW SW NW Section 22-11-3w, swabbed 155 bbls. on a four-hour test of sand at 6,494-6,535 feet, total depth. It was being cleaned out. Same people have completed their No. 1 Goodwin for 444 bbls. in four hours from sand found at 6,483-6,540 feet, total depth. Well is located 225 feet south and 42 feet west of C Section 22-11-3w. Larkin & Warr's No. 1 Johnson was also completed during the week. Sand at 6,424-88 feet, total depth, flow 191 bbls. in four hours.

A real stimulant was handed to operators in this biggest of Oklahoma fields through the deepening of Mid-Kansas Oil & Gas Co.'s No. 2 Mollman, NW SE SE Section 23-11-3w, when it initialed 2,680 bbls. from the School Land sand and the Hammer Handle sand found from 6,430-60 feet and at 6,545-6,560 feet, total depth. Production in this well was increased from around 300 bbls. per day. This was an old Simpson sand well originally bottomed at 6,410 feet. It will not be surprising to see quite a bit of activity going on in the Simpson zone of this field in the near future.

Tulsa, Okmulgee, Wagoner Counties

The following completions were recorded in Tulsa, Okmulgee and Wagoner Counties:

Green and others' No. 1-A Grayson, NW NE NE NW Section 18-19-14. Burgess sand at 1,308-22 feet, total depth 15 bbls. of oil after a 30-quart shot.

A. Pepis' No. 1-A Barnett, NW SW SE Section 131-8-14. Burgess sand 1,298-1,320 feet, total depth 1,322 feet, shot 40 quarts, pumped 75 bbls.

Boyd and others' No. 9 Horn, SE NE NW Section 23-18-14. Missed sands, total depth 1,422 feet, dry and abandoned.

Helvie & Stout's No. 1-A Atkins, SW NW NE Section 2-17-15. Sand at 1,057-83 feet, total depth, dry and abandoned.

White Rose Oil Co.'s No. 1 Porter, SW NE NW Section 14-17-15. Sand at 1,102-12 feet and sand at 1,120-95 feet, total depth, dry and abandoned.

Sands Petroleum Co.'s No. 1 Lovett, NE NW SE Section 22-17-16. Siliceous lime at 1,559-1,600 feet, total depth, water, dry and abandoned.

Crews and Armstrong's No. 4 Squire, SE NW SE Section 8-16-14. Glenn sand at 1,510-52 feet, total depth. Shot sand with 30 quarts, swabbed and flowed 85 bbls.

Carr Peterson's No. 13 Ware, C N half SW SW Section 9-15-14. Salt sand 822-52 feet. Total depth 891 feet, Shot 100 quarts and pumped 20 bbls.

Jack Summer's No. 7 McKinney, C E half NW NW Section 16-15-14. Salt sand at 819-41 feet, total depth, shot 80 quarts, pumped 20 bbls.

Papoose Oil Co.'s No. 26 Osborne, C NW SE Section 21-15-14. Red Fork sand at 1,575-1,600 feet, good show oil. Glenn sand at 1,687-97 feet, total depth, produced 12 bbls.

Bryan Petroleum Co.'s No. 1-A Roberts, SE NW SW Section 29-15-14. Wilcox sand 2,351-52 feet, total depth, hole full of water. Plugged back to 1,780

(Continued on Page 72)

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

OKFUSKEE COUNTY

Carter Oil Co.'s No. 1 W. H. Dill, C NW SE Sec. 2-11-8.
Drlg. 20 ft.

Delton Oil Co.'s No. 1 Fixico, SE cor. Sec. 7-11-8.
Drlg. 3,136 ft.

OKLAHOMA COUNTY

Gypsy Oil Co. et al's No. 1 Grant, C SE NW Sec. 27-12-4w.
Drlg. 7,284 ft. in dolomite.

Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; 400 ft. drill pipe in hole.

OSAGE COUNTY

Norbla O. & G. Co.'s No. 1, NW SE Sec. 21-24-7.
T.D. 2,525 ft.; repairing rig.

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-5.
S.D. 1,712 ft. for wtr.

Empire O. & R. Co.'s No. 1, SE NE Sec. 3-25-8.
Oswego lime 3,135-3,230 ft.; drlg. 3,298 ft.

PITTSBURG COUNTY

Arkhoma's No. 1 Cummings, NW NE SE Sec. 6-4-12.
Drlg. 760 ft.

Exchange Drlg. Co. et al's No. 1 Chunn, SE NW Sec. 29-4-14.
T.D. 350 ft.; waiting for csg.

W. E. Halley's No. 1 Drew, NW SW Sec. 21-3-14.
S.D. 190 ft.

Moffett & Hall's No. 1 Jones, C NE NW Sec. 14-8-14.
Lost tools; T.D. 3,200 ft.; S.D.

PONTOTOC COUNTY

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-2-6.
S.D. 2,920 ft.

Boyle et al's No. 1 Newbern, SW NE Sec. 21-5-4.
T.D. 3,237 ft.; hole full sulphur wtr.; S.D.

Emanuel, Rudman & Hatcher's No. 1 Mayer, SW SE NW Sec. 7-3-8.
S.D. 1,525 ft.

Jarrett Pet. Co.'s No. 1 Johnson, SE NW Sec. 28-4-4.
Drlg. 700 ft.

Dandridge et al's No. 1 Stafford, NW cor. Sec. 5-1-6e.
T.D. 680 ft.; S.D.

Gillette & Kroeger's No. 1 Duver, NW SE Sec. 36-1n-6e.
Drlg. 75 feet.

Riddle et al's No. 1 Barnes, SE NW SE Sec. 21-5-4.
T.D. 2,910 ft.; recemntg off drill pipe.

Southern Oil Corp's No. 1 Ladd, C NW NW Sec. 27-3-7.
Cellar.

Schermerhorn Oil Co.'s No. 1 Banks, SW SE SE Sec. 16-2-6.
Location.

POTTAWATOMIE COUNTY

Phillips and Gypsy Oil Co. et al's No. 1 Flynn, NE NW Sec. 17-6-3.
Drlg. 3,170 ft.

Stanolind-Amerada's No. 1 Goodman, SW NE NE Sec. 5-10-4.
Cored show oil 4,420-25 ft.

SEMINOLE COUNTY

Harman Oil Co.'s No. 1 Bowlegs, SE NE SW Sec. 1-7-7.
T.D. 1,655 ft.; fishing.

Moran et al's No. 1 Brinlee, SW NE Sec. 27-6-5.
Rig.

Tate & Starbuck's No. 1 Heard, SE NW Sec. 9-6-7.
T.D. 985 ft.; fishing.

Wrightsman Oil Co.'s No. 1 Smith, NW SE Sec. 25-10-7.
Rigging up rotary.

WASHITA COUNTY

Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 23-9-17w.
Rigged up and S.D.

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
T.D. 2,162 ft.; C.O.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3s-10e.
Drlg. 3,620 ft. in lime.

J. D. Boukan's No. 1 Howard, NW SW NW Sec. 20-2s-10e.
S.D. 1,135 ft.; machine moved out.

L. A. Pitts' No. 1 Blankenship, NE cor. NW Sec. 19-3s-10e.
Drlg. 630 ft.

Malernee et al's No. 1 Greenville, N. B., NW SW Sec. 36-2S-13e.
Drlg. 1,980 ft., shale.

CARTER COUNTY

Daphine Oil Co.'s No. 1 Hooks, SE NW NW SE Sec. 5-1s-2w.
Drlg. 862 ft.

Hudson & Poland's No. 1 Sullivan, NE SE Sec. 5-5s-1w.
Sand 2,938-58 ft.; S.O.; drlg. 3,220 ft.

McHenry et al's No. 1-A Ratliff, NW SW Sec. 23-1s-2w.
Sand 540-55 ft.; S.O.; set 6-in. csg. 540 ft.; W.O.C.S.

COMANCHE COUNTY

F. F. Stevens' No. 1 Green, SE SW Sec. 2-1-13w.
Drlg. 1,120 ft.

Heiden & Taylor's No. 2 Crutcher, C NE Sec. 11-1n-12w.
Drlg. 620 ft., granite wash.

GARVIN COUNTY

National Prod. Co.'s No. 1 Littrell, NE cor. Sec. 31-2n-3w.
S.D. 351 ft.

JACKSON COUNTY

Gypsy Oil Co.'s No. 1 Kelly, NE cor. Sec. 10-1n-20w (O.W.; P.B.).
Old T.D. 2,084 ft.; P.B. 1,688 ft.; sand 1,680-88 ft.; 22 bbls. oil in 6 hrs.; shut in.

JEFFERSON COUNTY

Geo. Pace et al's No. 1 Jack, NE NW NW, Sec. 10-4s-4w.
Drlg. 1,522 ft.

JOHNSON COUNTY

Okla. Oil Corp.'s No. 1 Tubbi, SW NE SE Sec. 11-2s-8.
Drlg. 1,709 ft.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
T.D. 4,937 ft.; S.D. for wtr.

MURRAY COUNTY

Gilcrease Oil Co.'s No. 1 Brown, SW cor. Sec. 26-1n-2e.
Drlg. 1,552 ft., conglomerate.

T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-2.
S.D. 2,420 ft.

PUSHMATAHA COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-6s-20e.
Set csg. 410 ft.

STEPHENS COUNTY

Carter Oil Co.'s No. 1 Hildebrand, C SW SE NE Sec. 1-3s-7w.
Set surface pipe 46 ft.

Carter Oil Co.'s No. 1 McCasland, C NW NW SW Sec. 22-1s-4w.
Set surface pipe 46 ft.; W.O.C.S.

J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
S.D. 3,210 ft.

TILLMAN COUNTY

J. H. Everett's No. 1 Crane, SW cor. Sec. 15-3s-14w.
Rig.

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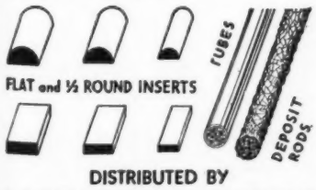

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Among Gulf Coast Drilling Contractors

Rowan Drilling Co. is moving a rig into Brazoria County, about 8 miles east of Hoskins Mound, to drill a well for the Amerada Petroleum Corp. Location will be approximately 1,500 feet north of the original well drilled in this area by Amerada, which was abandoned when heaving shale was encountered and could not be handled successfully. This test will be watched with interest. Rowan Drilling Co. also has two rigs running in the Cayuga Field for the Tide Water Oil Co., one in East Texas for the Humble Oil & Refining Co., and one in Ector County for Texas Co.

C. & C. Drilling Co. is setting up a rig for the Southern Seaboard Oil Co. for a wildcat test in the southern part of Burleson near the Washington County line. This well will be carried as No. 1 J. H. Coulter. Test will be carried to 6,000 feet if production is not encountered at a higher level.

In addition to his 11 rigs running as reported last week, George Echols is moving machinery on to a new location for the Sun Oil Co. about 13 miles southwest of San Diego.

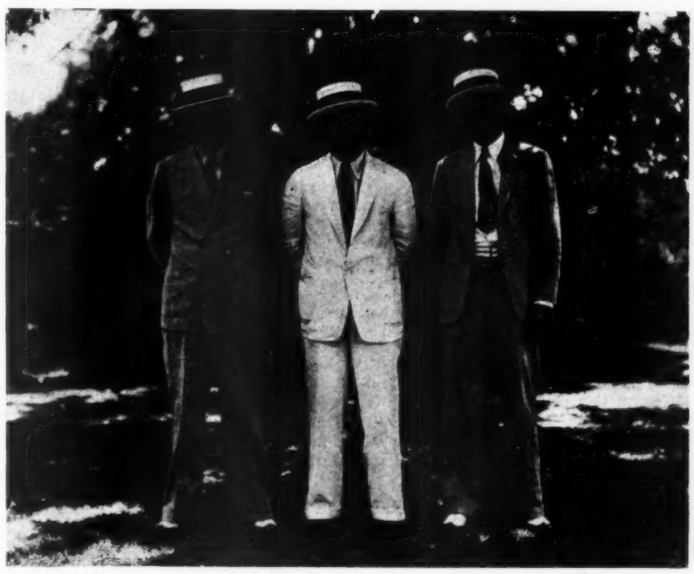
Turnbull and Irwin are moving a rig to location in Chambers County, about 4 miles south of Anahuac, for a wildcat test for themselves. This well will be carried as No. 1 Sudindorf. Same parties are also rigging up on a test for themselves in the S. Morris Survey, in the northwest corner of Jefferson County.

C. & R. G. Drilling Co. (Gus Cormier) is rigging up on a test for the Feltex Oil Co. in Victoria County, located on an 80-acre lease in the Manchola Survey.

Smith & McDannald have a new location to drill for Pure Oil Co. in the Louise Field. This company has recently purchased two complete rigs of a special heavy California type, both of which will be used in drilling for the Superior Oil Co. in the Bosco, Louisiana, Field. These rigs are said to be the heaviest ever built, and are manufactured by the Union Tool Co. This will give Smith & McDannald four rigs in the Bosco Field for the Superior Oil Co.

Alamo Drilling Co. has set up a rig for the Stanolind Oil & Gas Co. on a workover job in the Greta Field. The company also has a rig running for the same company near Agua Dulce, Nueces County, on a deep test.

John Deering is rigging up to drill a well in the Green's Bayou area, Harris County, Texas, for the Texas-New York Development Co. Location will be in the Moody Survey, close to the highway between Houston and Beaumont.



C. L. ROWAN, A. H. ROWAN and F. W. BRIGANCE

Goose Creek Field, Harris County, Texas, scene of the initiation of many men now prominent in Gulf Coast oil circles, was also the starting point for C. L. (Charlie) Rowan and A. H. (Arch) Rowan of Rowan Drilling Co., drilling contractors.

C. L. Rowan landed his first oil field job with the old Humble Oil Co. in 1916, before that company has become identified with the Standard Oil Co. In the succeeding seven years he worked his way up to a job as drilling superintendent, serving in this capacity for the Humble Oil Co. at Mexia, Corsicana, Smackover, Blue Ridge and Kingsville. Until he went into business for himself, Mr. Rowan worked for no other company than the Humble.

On being mustered out of the Marine Corps in 1919, A. H. Rowan also signed up with the Humble Oil Co. at Goose Creek, working there until illness forced his retirement from the active list for two years.

In 1923 the brothers combined their interests and with one rotary rig started in the contracting business. During the ensuing years they have drilled wells for many major companies and independent operators throughout the Gulf Coast, operating a number of strings of both rotary and cable tools. Wortham, Smackover, Darst Creek, Wink, East Texas, Conroe and Tomball are some of the important fields in which they have drilled. The company owns 11 producers in the East Texas Field on its own account.

F. W. Brigance, treasurer of the company, became associated with the Rowan brothers in March, 1933. He resigned as assistant credit manager for the Frick-Reid Supply Co. to become an officer of the Rowan Drilling Co., after serving 10 years with the former company.

Mrs. B. S. Brants, who has been with the Rowan Drilling for eight years, is secretary. Main offices of the company are in Fort Worth, a branch office being maintained in Houston.

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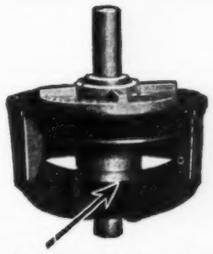
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Ten Tests To be Drilled Simultaneously at Bosco; Largest Producing Area in South Louisiana?

By A. C. EASTERWOOD
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., July 16.—The announcement of 10 new locations by Superior Oil Co. of California for the recently discovered Bosco Field, all of which will be drilled simultaneously, along with its present drilling tests either in the sand or nearing their critical depths, held much interest in Gulf Coast operations during the past week.

Superior has already been carrying on one of the most extensive wildcat programs ever witnessed in the Gulf Coast with six wells drilling within a radius of about 1½ miles of the discovery producer, No. 1 Hermandez. Superior's No. 1 Iseringhausen, about a mile east of the discovery and across the line in St. Landry Parish, the second producer for the field, brought the active tests to five last week when it was completed for 1,556 bbls. daily through twenty-four-sixty-fourths inch choke on tubing and seven-sixty-fourths inch choke on casing. It showed a tubing pressure of 2,090 pounds and a casing pressure of 2,410 pounds. The well bottomed hole at 7,853 feet and ran 7,700 feet of tubing with 2 joints of liner and 20 feet of slotted pipe on bottom of tubing.

It is the general opinion that this field will prove the largest producing area yet opened in southern Louisiana. Superior Oil Co.'s No. 1 Mire, about a mile west of the discovery, was waiting on cement to set with a total depth of 8,085 feet and will probably drill plugs and bring in during the early part of the week. The completion of this well will prove the field 2 miles in length. Superior's No. 1 Sidney Arceneaux and others was reaming with a total depth of 8,076 feet and will probably set casing the first of the week. No. 1 Richard was coring sand and shale at 7,800 feet. No. 1 Marcellus Savoie was drilling sand and shale at 7,351 feet, and No. 1 Kahn and others was drilling sand and shale at 6,092 feet.

Unusual Legal Phase

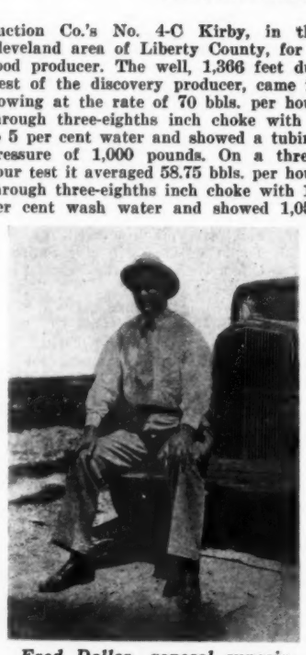
The extensvie drilling campaign is brought about due to the unusual legal phase existing there. The block was leased by the Pure Oil Co. on a 10-year basis with a well to be drilled on each of the leases before the expiration date of the 10-year term or the lease was to become void. Extensions have been made with many of the owners but it is understood drilling must be pushed on numerous other tracts. Of the 10 new tests to be drilled, Superior will drill 2, Laughlin will move in rigs for 4 of the wells, and Smith-McDaniel will drill the other 4 tests. Work has already been started on two of the tests, both in St. Landry Parish. No. 1 L. Savoie, about 3,500 feet north of the Iseringhausen producer, was digging pits. No. 1 Auguste Martinez, about 3,500 feet southeast of the Iseringhausen well, was also digging pits.

Standard of Kansas' No. 1 Joseph Mouton was still waiting on cement at 1,395 feet after setting 13⅜-inch casing.

About 12 miles northwest of the Bosco Field, Edwards Drilling Co.'s No. 1 Daigle, in Section 24-7s-1e, was coring lime and shale at 6,420 feet.

Cleveland Completion

Of great importance during the past week was the completion of Gulf Production Co.'s No. 4-C Kirby, in the Cleveland area of Liberty County, for a good producer. The well, 1,366 feet due west of the discovery producer, came in flowing at the rate of 70 bbls. per hour through three-eighths inch choke with 4 to 5 per cent water and showed a tubing pressure of 1,000 pounds. On a three-hour test it averaged 58.75 bbls. per hour through three-eighths inch choke with 15 per cent wash water and showed 1,050 pounds pressure on tubing. Later a 21-hour test was taken and the well made 930 bbls. of fluid through three-eighths inch choke, cutting 6 per cent salt water and showed 1,175 pounds pressure on tubing and 1,800 pounds pressure on casing. It was then pinched to 40 bbls. per hour through one-quarter inch choke and had a tubing pressure of 1,050 pounds. The oil tested 39 gravity. It had sand from 5,851-61 feet which is the total depth. The well has been completed for an initial production of 700 bbls. net oil daily.



Fred Dallas, general superintendent of production and drilling, Gulf Coast division, Pure Oil Co.

Gulf's No. 2-C Kirby, south of the discovery well, was completed for 125 bbls. net oil daily at 5,893 feet. On July 7 the well made 75.88 bbls. net oil through one-half inch choke and showed 25 pounds tubing pressure; July 8 it made 75.66 bbls. net oil plus 90 per cent salt water and showed 100 pounds pressure on tubing; July 9 it made 150.72 bbls. net oil out of 343 bbls. of fluid through one-quarter inch choke; and July 10 made 119 bbls. net oil out of 431 bbls. fluid and showed 175 pounds pressure on tubing. At last report it gauged 82 bbls. net oil out of 410 bbls. fluid and showed 200 pounds pressure on tubing and 900 pounds on casing.

West of Cleveland and in the northwestern part of Liberty County and southern part of San Jacinto County, Atlantic Oil Production Co. is reported to have purchased 200 acres of the R. Gibson 319-acre tract in the J. F. De Rumayor Survey for a consideration of $17.50 per acre.

Austin County

In Austin County, I.T.I.O. and Johnson Brothers are clearing location for No. 1 August Wrangler, about 3 miles east of New Ulm and in the Kuykendall Survey. The well is 450 feet out of the north corner of the 132.2-acre tract. This is a very important test and will be watched with much interest.

At Raccoon Bend, in Austin County, Humble Oil & Refining Co. has abandoned its No. 4-A Hardy in the W. M. Smithers Survey, after failing to find production in the Cockfield sand. The well bottomed hole at 4,450 feet. Humble has three more wells drilling for the recently discovered Cockfield sand in the area. No. 3 McCasland was drilling 4,006 feet in shale and lime, and No. 5-B Wilson was below 4,338 feet in shale.

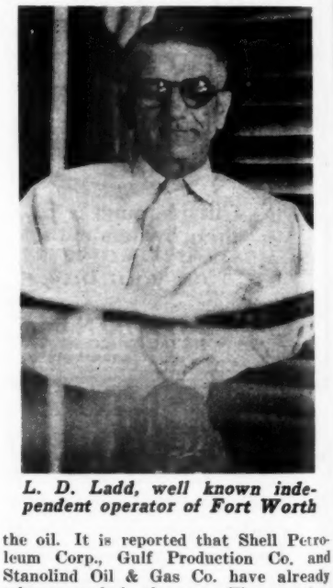
San Jacinto County

Two Cockfield sand tests proved failures in San Jacinto County during the past week. Phillips Petroleum Co.'s No. 1 Foster Lumber Co., in the northeast corner of the George Taylor Survey, was abandoned as dry with total depth of 3,513 feet. It topped the Massalina Pratti at 3,435 feet, had Hockley 3,525 feet and drilled top of the Cockfield 4,336 feet actual or 4,047 feet subsea. Turnbull & Irwin's No. 1 Peoples State Bank, in the J. D. Martinez Survey No. 4, bottomed hole at 3,651 feet and was abandoned as dry. It cored 4,633-51 feet with an 18-foot recovery which revealed salt water sand. The well topped Hockley 3,762-82 feet and had top of Cockfield 4,550 feet actual or 4,367 feet subsea.

In the central portion of the county and about 2½ miles southwest of Point Blank, A. H. Crider and T. H. Pagoda are planning to start a Cockfield test in the near future. Operators have around 5,500 acres centering around the west side of the M. A. Stephens Survey, and the agreement calls for a well to start within 120 days after June 14.

Chambers County

Due east of Analuac in Chambers County, Turnbull & Irwin are rigging up on No. 1 Sudindorf. The test will be drilled the center of the west line of the 483-acre tract in the H.&T.C. Survey, Section 67. This will be a 7,500-foot test. Turnbull & Irwin received the 3,200-acre block which centers around the test from W. C. Moore for a consideration of $600,000 out of one-eighth of the oil. It is reported that Shell Petroleum Corp., Gulf Production Co. and Stanolind Oil & Gas Co. have already taken spreads in the area. The area has been worked extensively by geophysical instruments.



L. D. Ladd, well known independent operator of Fort Worth

Galveston County

Humble Oil & Refining Co.'s No. 1 Maco Stewart, near Dickinson in Galveston County, was drilling 5,523 feet in shale. Gillock Petroleum Co.'s No. 1 Maco Stewart, about 4 miles south of Dickinson, was still shut down at 6,577 feet. It is reported Shell Petroleum Corp. has recently taken 226 acres checkerboarded around the well for a consideration of $8,600.

Harris County

Just west of Houston city limits, in Harris County, Loring Oil Co.'s No. 1 Westmoreland was drilling 5,510 feet. In the west central part of the county, General Crude Oil Co.'s No. 1 Rorick Estate, in the John C. Ogburn Survey, was drilling shale and lime 1,690 feet. In the same area, Humble Oil & Refining Co. is

Wildcat Operations on Gulf Coast

Week Ending July 14

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 3 Effie Kearns, 270 ft. W of E line, 825 ft. N of S line of 175-ac. lease in W. C. White Sur.
Old T.D. 4,750 ft.; P.B. to 3,432 ft.; cmt. 7-in. csg.; T.D. 3,445 ft.; putting on pump.

Humble O. & R. Co.'s No. 3 McCasland.
Drlg. sand 4,006 ft.

Humble O. & R. Co.'s No. 6 M. R. Sherrod, 933 ft. E of W line, 466 ft. N of S line of W. C. White Sur.
Drlg. shale and lime 2,553 ft.

Humble O. & R. Co.'s No. 14 Roy Thompson, 466 ft. S of N line, 933 ft. E of W line of 253-ac. tract in W. C. White Sur. Location.

Humble O. & R. Co.'s No. 5-B Wilson.
Drlg. shale 4,338 ft.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 6 Blakely & Winston.
Drlg. sticky shale 1,841 ft.

Shell Pet. Corp.'s No. 3 Haury, 300 ft. SE of No. 2 in line with No. 2 and No. 1 Blakely-Winston, H.&T.B. Sur. No. 13.
Drlg. hard sand 2,774 ft.

Shell Pet. Corp.'s No. 1 Schmitt, 318 ft. E, 107 ft. S of NW cor. of 149.7-ac. tract in J. H. Bruner Sur.
Drlg. 1,633 ft

DAMON MOUND—BRAZORIA COUNTY

Esco's No. 1-D Wisdom, 25 ft. from S and W lines of Blk. D, Lot 5, A. Darst Sur.
T.D. 1,053 ft.; S.D.

H. Wisdom's No. 2 fee, A. Darst Sur., 50 ft. E W line and 200 ft. N of No. 1.
Shale 1,120 ft.; S.D.

H. Wisdom's No. 3 fee, A. Darst Sur.
Shale 130 ft.; no report.

H. Wisdom's No. 1 Proctor, 40 ft. out of SW cor., Blk. 1, A. Darst Sur.
T.D. 800 ft.; S.D.

MANVEL—BRAZORIA COUNTY

Gulf Prod. Co.'s No. 1 Col y.
T.D. 5,118 ft.; comp. 599 bbls.

Max O. Millner's No. 1 H. F. Stipp, 220 ft. W of E line and 195 ft. N of S line of Lot 28, H.&T.B. No. 23 Sur.
Location.

Texas Co.'s No. 11-B Belcher, 660 ft. S, 48 deg. 9 ft. E of B-10 and 330 ft. N, 41 deg. 51 ft. E of SW line of lease, H. N. Little Sur.
Drlg. shale 3,164 ft.

Texas Co.'s No. 2 Boft, 200 ft. N and 24 ft. W of S line and 330 ft. S 41 deg. 51 ft. E from NE line of Lot No. 7 in Charles O'Donnell Sur.
Drlg. sand and boulders 3,260 ft.

Texas Co.'s No. 2 Ellis, 330 ft. S, 82 deg. 48 ft. W from E line, 330 ft. N 48 deg. 20 ft. W of SE line of lease in H. N. Little Sur.
Drlg. shale and lime 2,931 ft.

Texas Co.'s No. 2 Houston Oil Field Association, 247 ft. from N line and 247 ft. from S line and 441 ft. from W line of Lot 43, A.C.H.&B. Sur., Sec. 91.
Drlg. shale and lime 3,797 ft.

Texas Oil Co.'s No. 1 Houston Oil Field Association, 330 ft. from W line and 265 ft. from S line of Lot 6, A.C.H.&B. Sur., Sec. 91.
T.D. 4,344 ft.; W.O.C.

(Continued on Page 73)

reported to have recently taken 960 acres out of the H.&T.C. and W.C.R.R. Surveys. Near the Humble Field, Emerald Petroleum Co.'s No. 1 Griffith was drilling 4,156 feet. It topped Discorbis 3,995-4,025 feet and had top of Heterostegina 4,115-35 feet.

Waller County

Southeast of Raccoon Bend and in western Waller County, Sun Oil Co. is reported to have recently taken 340 acres in the Sam Williams Survey and Padillo two league grant.

At Splendora

At Splendora, in Montgomery County, Humble Oil & Refining Co.'s No. 1 Anna M. Platte, in the William Barber Survey, was drilling 1,400 feet.

West of Conroe

West of town of Conroe, Shell Petroleum Corp. has completed building derrick for No. 1 Crighton in the Mary Corner Survey. The well is 1.480 feet west

W. T. Minor, driller for the Humble Oil & Refining Co., Childress Texas

and 290 feet south of northeast corner of the lease. Deering & Frazier's No. 1 L. Hicks, in the T. Taylor Survey, has been abandoned as dry with total depth of 5,603 feet. It drilled base of Frio 3,370 feet, had top of Warreni 4,001-10 feet, topped Hockley 4,468-84 feet, and drilled top of Cockfield 5,318 feet.

Fort Bend County

Gem Oil Co.'s No. 1 Farmer, near Needville in Fort Bend County, was drilling sticky shale 3,021 feet. It cored slightly sandy shale from 2,745-59 feet. Houston Oil Co. recently purchased 100 acres just south of the well. Vico Oil Co. has completed derrick for No. 1 H. R. Darst, in the northeast part of the county and southwest of Beasley in the E. Powell Survey.

About 3 miles south of Big Creek in Fort Bend County, Parker and Aston are reported to have leased all of Sections 42, 43 and the N half Section 44, H.&T.C. Survey, for a Cockfield sand test.

Brazoria County

At Rattlesnake Mound in Brazoria County, Amerada Petroleum Corp.'s No. 1 Houston Farm Development Co. in the L. Bachelder Survey No. 156, was drilling gumbo at 2,822 feet.

Polk County

About 3 miles north of Livingston in Polk County, Werby and others' No. 1 Dick and Failing in the A. Viesca Survey, was preparing to test. Last week the well showed favorable indications of making a good producer when on a drill stem test from 4,317-42 feet in 15 minutes through three-quarters inch chokes on top and bottom it built up 250 pounds pressure and showed 20 fourbles of oil and 2 fourbles of mud cut with oil and fresh water. It topped Hockley at 3,476 feet and drilled top of Cockfield at 4,263 feet actual or 4,031 feet subsea. It has been waiting on cement to set after cementing 7-inch casing at 4,326 feet. Gem Oil Co.'s No. 1 Davis-Holmes, discovery well at Livingston, had cleaned hole and washed to bottom preparatory to deepening. Total depth is 4,311 feet.

Hardin County

At Sour Lake in Hardin County, Alpha Petroleum Co.'s No. 1 J. M. Weiss, in the H. Williams Survey, was trying to run 197 feet of screen. The well is showing a high pressure and flowing fluid into pits consisting of as much oil and mud. It is reported to have had 25 feet of pure sand in 190 feet of section, the upper part being in the Cockfield and the lower sand reported to be the Saline Bayou, which is the upper part of the Yegua. The well topped the Cockfield at 6,818 feet. Alpha has staked location for No. 2 Weiss, 66 feet north and 100 feet west of the southeast corner of five-acre tract in Lot No. 25, H. Williams Survey, Humble Oil & Refining Co.'s No. 1 Kirby and others, in the S. Jackson Survey, was drilling hard sand at 5,072 feet.

On the south flank of the Saratoga Dome in Hardin County, Sinclair Prairie Oil Co.'s No. 1 Teel estate, was drilling at 5,118 feet in shale. Wilcox Oil & Gas Co.'s No. 1 Sternberger in the C. Dorsey Survey No. 1, was shut down at 4,360 feet in shale.

San Felipe Dome

At San Felipe Dome in Waller County, L. W. Capps and S. J. Sloan's No. 1 Vaughn, in the J. McFarland Survey No. 46, has been abandoned as dry at 2,924 feet. The well showed favorably at first but on drill stem test from 2,-854-2,924 feet in 10 minutes through three-eighths inch chokes on top and bottom it registered no pressure and showed 3 fourbles of mud and 22 fourbles of salt water.

Jefferson County

About 4 miles northwest of Hampshire in Jefferson County, Sun Oil Co. is reported on a deal for 11,000 acres of the Gilbert ranch.

West Columbia County

At West Columbia in Brazoria County, Miramar Oil Corp.'s No. 3 Hogg, about 100 feet north of No. 2, was in heaving shale at 5,165 feet. On a drill stem test from 4,837-4,901 feet in nine and one-half minutes it showed 20 fourbles of salt water and mud.

Jackson County

In Jackson County, Phillips Petroleum Co. is reported to have definitely closed a deal for the purchase of the Encio Gas Co.'s holdings in the new Vanderbilt Pool. The deal included the 2,600-acre block and the one producing well, No. 1 Toney, one well in the sand and another drilling. A total of 17,500 bbls. has already been shipped from the producer. Early in the week the well was producing at the rate of 405 bbls. daily on seventeen-sixty-fourths inch choke and showing 500 pounds tubing pressure and 600 pounds casing pressure.

Victoria County

In Victoria County, Humble Oil & Refining Co.'s No. 1 Agnes Murphy in the C. Ce la Garza Survey, Abstract No. 46, has been abandoned with total depth of 4,212 feet.

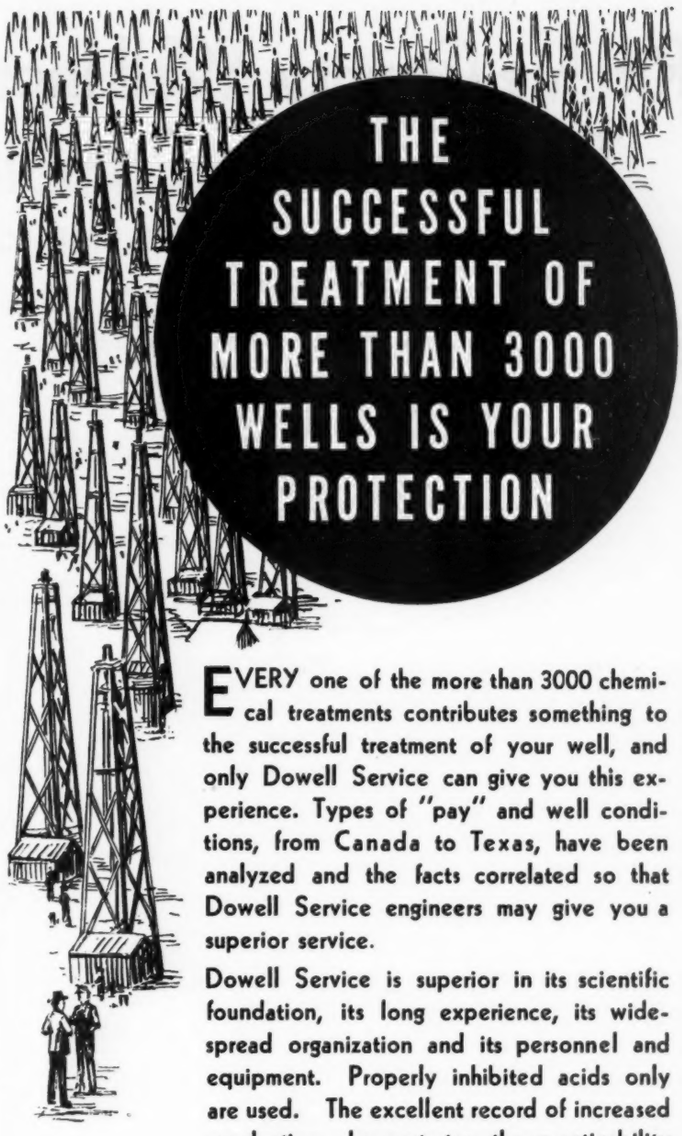
Calhoun County

In the southern part of Calhoun County, Continental Oil Co.'s No. 1 Moody, in Block C, between Seadrift and O'Connor, was drilling at 5,381 feet in shale. Herman Heep Oil Co.'s No. 2 F. Welder was drilling at 5,655 feet. It topped sand at 5,408-14 feet and on a drill stem test showed oil, gas and water.

SOUTH LOUISIANA

About 10 miles east of De Quincy in Beauregard Parish, Federal Petroleum Co.'s No. 1 Lutcher-Moore in Section 4-6-12, was drilling at 8,016 feet. Federal

(Continued on Page 78)



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SEMINOLE, OKLAHOMA
TULSA, OKLAHOMA
FORT WORTH, TEXAS
LULING, TEXAS
MIDLAND, TEXAS
PAMPA, TEXAS
WICHITA FALLS, TEXAS

Ritchie County Well Increases to 300 Bbls. Daily; Twenty-Three Completions in Eastern Fields

By STAFF CORRESPONDENT

PITTSBURGH, Pa., July 16.—About 1½ miles northwest of Ellenboro in Clay district, Ritchie County, West Virginia, the test on the F. M. Wince farm, which had been showing for about 25 bbls. a day from the top pay in the Injun sand, was drilled deeper in that sand and struck a second pay and was shot. It increased to about 300 bbls. a day. The operators are G. A. Smith and others.

This is the largest of the recent wells drilled in at the lower end of the Pike Pool. Drilling in that district is the Smith and Hendershot test on the Charles Wilcox farm and Smith and others on the B. Wince farm. Smith and Rexroad have made a location on the C. O. Delancey farm and Cottrell and others have made a location for a second test on the M. S. Riggs farm. No. 1 on the Riggs farm was a 10-bbl. producer.

Twenty-three wells were completed in the lower eastern fields during the week and there were also seven dry holes. All districts were represented by fair wells with the majority of the completions in Southeast Ohio. New production totaled 488 bbls.

SOUTHEAST OHIO

In Belmont County, Peters and Patterson completed a test on the Lorain Coal & Dock Co. property in Section 26, the southwest corner, Richland Township. It was drilled in the Maxon sand at 1,140 feet and is a gas well showing for about 500,000 feet a day. In the same township but the southwest quarter of Section 20, Shorts Brothers completed a test on the Thomas Frieberg farm in the same formation at 1,155 feet. It is also a 500,000-foot gas well.

In Coshocton County, Murphy Petroleum Co. and others completed No. 4 on the Ward A. Little farm in Section 17, Perry Township, in the Clinton sand at 3,085 feet. It produced 12 bbls. the first day, natural, and after shot will probably make a 25-bbl. pumper. In the same section and township, Preston Oil Co. completed No. 3 on the Alonzo VanWinkle farm in the Clinton sand at 3,193 feet. It had 500 feet of fluid in the hole when drilled in and is showing for a 20-bbl. pumper.

In Jefferson County, a local company drilled a test on the Jacob Abraham farm in the northwest quarter of Section 28, Island Creek Township. It is a small gas well in the Berea sand at 1,400 feet and another gas well on this farm has been producing gas for years.

There were two tests completed in Knox County. In Section 1 of Jackson Township, Pure Oil Co. completed a test on the John S. Stricker farm in the Clinton sand at a depth of 3,260 feet and it is a 3,000,000-foot gas well. It was completed short of the bottom pay which is usually the oil formation. On Lot 14 in Butler Township, the Upham Oil & Gas Co. completed a test on the George Stricker heirs farm in the Clinton at 3,280 feet. It is also a gas well and had a showing of oil about 40 feet in the sand.

Licking County

In Licking County M. F. Whitehill drilled No. 3 on the Alice Ashcraft farm in Section 2, Perry Township in the Clinton sand at a depth of 2,850 feet. It produced 45 bbls. the first day after shot.

In Medina County, Oko Oil & Gas Co. completed No. 63 on the Henry Essig farm, Tract 13, Lot 2 and 3, Chatham Township. It is showing for 8 bbls. a day from the Berea grit at 471 feet after shot. In this township and Tract 13, Lot 12, E. R. Edson & Son Co. completed No. 48 on the Ed G. Miller farm at 515 feet, the Berea grit. It produced 5 bbls. the first day after shot. In Section 1 of Litchfield Township, D. A. Lake completed No. 13 on the Pearl and Frank Weaver farm in this formation at 299 feet. It produced 10 bbls. the first day after shot.

In Monroe County, R. W. Dunn and others completed a test on the Peter Edington farm in the southeast quarter of Section 29, Perry Township. The total depth is 1,656 feet and it is producing 2 bbls. a day from the Keener sand and about 13 bbls. a day from the Injun sand. In Section 13, Wayne Township, Ellis Hayes and others completed No. 3 on the O. E. Hartshorn farm in the Keener sand at 1,300 feet. It is showing for a small gas well.

In Morgan County, in the northeast part of Section 1, Windsor Township, Charles D. Mosher and others drilled No. 5 on the Charles Yarnell farm through the Cow Run sand to a depth of 562 feet. It is a dry hole.

In Noble County, W. F. Greenlees and others drilled a second test on the George Rothley farm in the southeast quarter of Section 6, Jefferson Township, through the 300-foot sand. There was no showing of oil or gas.

In Washington County, E. A. Sexton and others completed a test on the John W. Haas farm in the southern part of Section 16, Salem Township, in a stray sand at 665 feet. It is producing 8 bbls. a day after shot, and is new production. On the southeastern part of Lot 1,078, Palmer Township, M. A. Martin and others drilled No. 6 on the M. A. Martin farm through the Cow Run sand to a depth of 640 feet. It is a dry hole.

WEST VIRGINIA

There were three additional producers in West Virginia during the week. In Calhoun County on Lemuels Run in Sheridan district, Godfrey L. Cabot, Inc., drilled deeper No. 3 on the J. M. Bennett farm 9 feet in the Salt sand from which it had been a gas well. It is now a producer making about 12 bbls. a day.

In Roane County, Henderson Oil Co. completed a test on the E. S. Ball farm in the Cow Run sand at 1,168 feet which is showing for 15 bbls. a day. The location is in Curtis district.

In Wayne County, about 11 miles north of Chartiers Oil Co.'s test on the Alex Damron farm in Ceredon district and on the waters of Spring Valley Run, J. H. Wilson drilled a test on the Spring Valley Country Club through the Corniferous lime to a total depth of 2,704 feet. It was shot in the Berea sand at 1,905 feet and from that formation is showing fofr 1 bbl. a day. It is likely that this test will be abandoned.

Reconditioning is still in progress and with fair results. A good many wells have been tested with an acid shot wherever the sand appears permeable. This has returned many wells which have some lime content in the sands to a high production rate and in some cases larger than when originally completed.

Gas Wells

There were only two gas wells completed in West Virginia, both in Calhoun County. In Sherman district, Mollahan and Poling completed a test on the Johnathan Burrows farm in the Injun sand at a depth of 2,126 feet. It is a light gas well. In the same district, F. F. McIntosh completed the fifth well on the O. S. Bennett farm, No. 4 location, in the Injun sand at 1,977 feet, as a gas well.

In Ritchie County there were two dry holes. In Clay district near the Lost Run Pool, John Deem and others drilled a test on the L. E. Robinson farm through the Injun and Squaw sands to a depth of 2,080 feet. It was dry. On Wild Cat Run in Grant district, Petroleum Products Co. drilled No. 21 on the C. J. and M. Carroll farm through the Injun sand and it was dry.

In Pleasants County, Dinsmoor & Co. drilled No. 5 on the A. J. Boley farm in Washington district through the Cow Run sand and it was also a dry hole.

Drilling in West Virginia

In Boone County, Godfrey L. Cabot, Inc., has two new tests. In Washington district he has a rig standing on the White and Hopkins farm and part of the material on the ground on the Spruce-Boone Land Co. In this district his test on the Sidney White farm is drilling at 2,275 feet. Pond Fork Oil & Gas Co. is rigging up No. 18 on the Cole and Crane lease. In Sherman district, Pure Oil Co. is drilling No. 67 on the Federal Coal Co. tract at 1,805 feet, No. 68 at 949 feet; No. 2 on the Lafollette, Robson and Prichard Tract C at 311 feet, and No. 260 on the Williams Coal Co. tract at 1,230 feet. In this district Godfrey L. Cabot, Inc., has reached 2,213 feet in No. 3 on the J. Q. Dickinson farm and 2,890 feet in No. 53 on the Federal Coal Co. lease.

In Cabell County, West Virginia has a new test starting on the Alifair Adkins farm in McComas district which is being rigged up. In this district three wells are drilling: R. H. Adkins and others on the C. P. Rousey farm at 1,738 feet; West Virginia Gas Co. at 1,396 feet on the John J. Porter farm, and H. H. Baker Gas Co. on the Augusta Beckett farm at 1,600 feet. In Barboursville district, the United Fuel Gas Co. has rigged up on the J. W. Starkey farm for the second test.

In Calhoun County, on Three Mile Creek in Sheridan district, W. F. Bickerstaff and others have a rig standing for No. 4 on the William Cooper farm. In Washington district, Ohio Valley Gas Corp. has started drilling on the N. L. Norman farm. In Lee district, Mudlick Oil & Gas Co. has reached 1,825 feet in a second test on the Almeda Meadows farm. In Sherman district, Godfrey L. Cabot, Inc., is drilling deeper No. 9 on the W. T. Rafferty farm.

In Gilmer County there is little change in Center district. In DeKalb district, McCall and others are down 765 feet in No. 4 on the Lee Gainer farm and Clem Morris and others are drilling at 340 feet on the Cora B. Gainer farm No. 4.

In Harrison County, Raad and Moses have reached 1,980 feet in the second test on the A. P. W. Flanigan farm in Ten Mile district. In Kanawha County, Godfrey L. Cabot has four wells drilling. No. 44 on the A. D. Huntington lease is at 2,068 feet and No. 45 at 640 feet. No. 7 on the Campbells Creek Coal Co. is down 515 feet and No. 6 on the William P. Tompkins farm has reached 1,315 feet. The two latter are in Malden district and the former in Cabin Creek district.

In Lincoln County there is additional activity. In Jefferson district David Gas Co. has part of the material on the T. W. Dolan farm. In Carroll district, R. H. Adkins and others have part of the material on the Victoria Adkins farm. In Sheridan district, Kanawha Gas & Utilities Co. has reached 1,500 feet on the W. S. Snodgrass farm, a test.

In Marion County, Monroe and Laughlin are drilling at 1,700 feet on the Howard Rice farm. Carnegie Natural Gas Co. has reached 550 feet on the Martha E. Keenan farm, No. 2. Both are in Mannington district.

In Monongalia County, Harry L. Tennant is nearing the sand at 2,970 feet in No. 5 on the Wise and Tennant lease in Battelle district. In Clay district, the Chartiers Oil Co. is drilling at 700 feet

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Administrator's Report on Crude Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ended July 7 totaled 344,092,000 bbls., an increase of 385,000 bbls. over the total of 343,707,000 bbls. on hand at the end of the preceding week, Harold L. Ickes, Secretary of the Interior and administrator of the code of fair competition for the petroleum industry, announced today. This increase, which followed a gain of 591,000 bbls. during the previous week, comprised an increase of 268,000 bbls. in domestic crude stocks and an increase of 117,000 bbls. in foreign crude stocks.

Current reports of the industry for the week ended July 7, in comparison with those for the previous week, indicate that daily average crude production declined approximately 70,000 bbls. and imports declined about 45,000 bbls. daily. Crude runs to stills remained at virtually the same level, that is, at about 2,500,000 bbls. daily. The approximate daily average balance of crude oil for the week ended July 7 was as follows (barrels): Production, 2,570,000; imports, 83,000; equals runs to stills, 2,500,000; increase in stocks, 55,000; exports, losses, etc., 98,000.

CRUDE PETROLEUM STOCKS REPORTED BY COMPANIES HOLDING 100,000 BBLS. OR MORE

Grade of crude oil—	Stocks held by reporting companies June 30, 1934 (bbls.)	July 7, 1934 (bbls.)	Change from June 30, 1934 (bbls.)
Pennsylvania Grade	4,676,000	4,632,000	— 44,000
Other Appalachian, including Kentucky	1,232,000	1,247,000	+ 15,000
Lima, Northeast Indiana-Michigan	1,495,000	1,537,000	+ 42,000
Illinois-Southwest Indiana	11,236,000	11,280,000	+ 44,000
North Louisiana and Arkansas	10,866,000	10,843,000	— 23,000
West Texas and Southeast New Mexico	29,216,000	29,353,000	+137,000
East Texas	41,256,000	41,184,000	— 72,000
Other Mid-Continent	161,705,000	161,722,000	+ 17,000
Gulf Coast	16,699,000	16,887,000	+188,000
Rocky Mountain	27,826,000	27,887,000	+ 61,000
California	33,938,000	33,841,000	— 97,000
Total domestic crude	340,145,000	340,413,000	+268,000
Foreign crude	3,562,000	3,679,000	+117,000
Total crude	343,707,000	344,092,000	+385,000

Record Activity in Michigan Adds 12,000 Bbls.; Potential Increases 50,000 Bbls. in Month

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., July 16.—Record activity in Michigan resulted in the addition of more than 12,000 bbls. of new production and at least 2,500,000 feet and possibly more than 10,000,000 feet of gas when 25 wells in 13 areas were reported. Recognizing this activity the Michigan producers proration committee cut the allowable from 5 per cent of all over a minimum of 100 bbls. to 5 per cent over 75 bbls. a day exempted, the lowest minimum yet in Michigan. July 1 potential reached a peak at 180,346 bbls. a day compared with 131,801 bbls. as of June 1, an increase of nearly 50,000 bbls.

Porter Township, Midland County, operations contributed five completions aggregating 9,245 bbls. and a sixth well increased from an original 50 to an estimated 2,000 bbls. a day, an important extension between the Yost and Clark wells indicating a trend northwest.

Two new gassers were completed, one in Broomfield Township with 1,750,000 feet and the other in the Austin Township, Mecosta County, Field with 1,500,000 feet from a 3-inch core hole and a predicted open flow up to 10,000,000 feet a day.

An interesting new show in Newaygo County where a new wildcat was started last week indicated a possible new western Michigan play. Nine wells failed to produce with several being plugged and abandoned but about half drilling to lower formations for a further test.

A third good sized producer was made of a well which two weeks ago was reported a "duster" in the Home Township, Montcalm County, Field about which the principal wildcat play in the State is now centered. One of several wildcats nearing possible production in the upper Traverse formation in Home Township struck a light show 80 feet in but was not expected to develop commercial production.

Porter Township

All five of the new producers in Porter Township, Midland County, were Pure Oil Co. wells ranging from 25 to 4,000 bbls. a day initial. The largest was No. 13 H. Neitzke, NE NW SE Section 21-13n-1w, making 198 bbls. an hour at 3,421 feet, or 4,000 bbls. a day. Three wells averaging 1,800 bbls. each were No. 14 H. Neitzke, SE SW NE Section 21, which made 689 bbls. in seven hours, an estimated 2,100 bbls. a day; No. 3 Everett Kleinhans, NE SW NE Section 20, which made 222 bbls. in five hours, an estimated 1,500 bbls. a day, topping Dundee limestone at 3,377 feet and completing at 3,427 feet, and No. 2 Bond-Risley, NE NE NE Section 20, which made 90 bbls. an hour, 265 bbls. in four and one-half hours, an estimated 1,800 bbls. a day. It topped Dundee at 3,381 feet, was drilled to 3,430 feet and plugged back to 3,425½ feet for completion. Completion of two more H. Neitzke wells made a total of 14 on a 160-acre lease with two more locations, Nos. 15 and 16, not yet drilled.

Pure's No. 2-C Laura E. Root, SW NE NW Section 20, topped the Dundee at 3,380 feet, was drilled to 3,440 feet and plugged back to 3,432 feet to be treated with acid as it was rated only a 25-bbl. natural producer. Richard Hall's No. 1 Bond-Harris, SE NW SE Section 7, Porter Township wildcat between the Yost and Clark wells, was boosted from an initial of 50 bbls. when drilled in several weeks ago to about 2,000 bbls. by acid treatment. It is considered an important southwest extension.

McClanahan Oil Co.'s No. 1 Converse, SE SE NW Section 28-14n-2w, Greendale Township, Midland County, had a show of oil in the Dundee at 3,447 feet but struck bottom water at 3,492 feet and was being plugged back to test a good flow of upper Traverse oil encountered several weeks ago promising a possible important extension.

Isabella County

Two small Dundee oil wells were completed in Vernon Township, Isabella County, while two more struck oil and probably will be completed this week. Templemayr and Tope's No. 2 Wood, SW SW NW Section 22-16n-4w, made about 60 bbls. a day, while Columbia Oil & Gas Co.'s No. 1 J. E. Simpson, NE SE SE Section 16, topped Dundee at 3,802 feet and completed at 3,814½ feet for about the same initial. Mohawk Oil Development Co.'s No. 1 James Duncan, NE SW SW Section 9, an outpost, had a show in Dundee but was not completed. Tri Oil Co.'s No. 1 Icem C. Slentz, NE NE NE Section 22, had a show and was completing as the week closed. Morris-Van Keuren Development Co.'s No. 2 Bowman estate, SE NE NW Section 27, failed in the Dundee and was deepening to the Monroe.

Strange and Fortney's No. 1 J. W. Campbell estate, NE NW NW Section 31-15n-3w, Denver Township, Isabella County, topped the Dundee at 3,625 feet, struck a show which filled up 300 feet with oil and then went into water at a total depth of 3,676 feet. It was being plugged back for acid treatment. McClanahan Oil Co.'s No. 1 John Hicks, SW NW SW Section 27, also Denver, was dry and abandoned at 3,656 feet.

One Broomfield Township well struck gas in the Michigan Series sand, while another was dry as a second Dundee test in the gas pool.

George G. Hanners' No. 2 Keeler-Mitchell, SE NW Section 9-14n-6w, Broomfield Township, Isabella County, flowed 1,750,000 feet a day. Michigan Cities Natural Gas Co.'s No. 3 Bartlett-McClintic, NW SE Section 3, was dry and abandoned in the Dundee at 3,645 feet.

Mecosta-Montcalm Counties

A well which virtually assured construction of a proposed new 55-mile natural gas pipe line from Austin Township, Mecosta County, to Muskegon and Muskegon Heights at an estimated cost of $500,000 was drilled into the Michigan Series gas sand on the J. M. McKeough lease, C SW Section 2, Austin Township, by Taggart Brothers, Inc. It was their seventh well in the field, now the greatest gas pool in Michigan.

Gas was encountered at 1,321-24 feet while coring and the well was estimated good for 1,500,000 feet a day before drilling in with the full sized hole. Estimates of its probable completed production ranged upwards to 10,000,000 feet. It was drilling in with cable tools.

Pure Oil Co.'s No. 1 H. J. Hansen, NE NE NW Section 10-12n-6w, Home Township, Montcalm County, was increased from an initial of 60 a day to 600 bbls. by acid treatment. It was producing 245 bbls. daily against an 800-pound back pressure. It is the third producer in the new Montcalm upper Traverse field and was originally reported dry when water broke through the casing before it was drilled in.

Theodore Oil Co.'s No. 1 Sherwin, SW SW SW Section 13, Home Township, had a light show 80 feet in the upper Traverse but was not very promising.

Western Michigan

Ichenberg Brothers, on whose property the Newaygo Prospecting Co. recently completed an unsuccessful deep test after striking a show of oil and gas in the Dundee formation at 3,368 feet, are reported to have encountered another Dundee show in No. 1 fee, near Grass Lake, SE NE Section 12-16n-12w, Home Township, near the north Newaygo County line. It is several miles west of No. 1 Ichenberg completed about April 1 at a depth of 3,450 feet in Section 7-16n-11w, Newaygo County.

Muskegon Development Co. started a new Newaygo County test, No. 1 Edward Kolbe, NW SW SE Section 31-15n-14w, Beaver Township, about 3 miles southeast of Pennsylvania Oil & Gas Co.'s No. 1 Burt Snow well, NW SE Section 23-15n-15w, Leavitt Township, Oceana County. The Snow well had shows of gas and oil in the Berea, Traverse, Dundee and Sylvania and was considered one of the most promising prospects for development of a Newaygo County pool several years ago. It was shot with 30 quarts for both of the lower shows, in the Dundee at 2,663-70 feet and in the Sylvania at 3,252-64 feet before being abandoned at 3,500 feet.

Muskegon Development Co. announced a new location on the Mary Eggleston property, a 10,000-acre lease, to be drilled in NE NE Section 17-21n-2w, Nester Township, Roscommon County, between Gladwin and Prudenville, near Houghton Lake. It will be about 2 miles east of the Grayling Development Co.'s No. 11 State and about 6 miles east of same company's No. 13 State, two structure test wells drilled by the Dixie Oil Co., former Michigan operating subsidiary of Standard Oil Co. of Indiana, in 1929.

Two western Michigan tests, a wildcat in Fruitport Township, Muskegon County, and an outpost in Hart Township, Oceana County, failed to strike production in the upper Traverse formation this week.

Muskegon Oil Corp.'s No. 1 Mary Halter, SW SW SW Section 22-9n-16w, Fruitport-Muskegon, topped the Traverse at 1,707 feet but struck water 3 feet in at 1,710 feet. It is about 6½ feet higher on structure than Wright Oil Co.'s No. 1 W. B. Farr test which had a show in Traverse about 1½ miles east of the new test several years ago. The Halter well is drilling at about 1,800 feet on the way to the Dundee.

H. C. Nelson's No. 1 Joseph and Anna Christman, W half E half SW Section 25-15n-17w, Hart Township, Oceana County, failed to produce in the Traverse after being treated twice with 500 gallons of acid and shot once with 100 quarts of nitroglycerin for a show at 1,880-88 feet. Mr. Nelson, a Muskegon operator, also shot No. 1 Myrtle Spitler, Section 31-15n-16w, Elbridge Township, a previous small producer.

Eastern Michigan

Three "dusters" comprised the completion record in three eastern Michigan areas. J. A. McKay's No. 1 Hodgson, Section 6, Grant Township, Clare County, was reported a failure in the Michigan gas sands. Crabon Oil Co. will abandon its No. 1 Berg in Section 26, Birch Run Township, after failure in the Dundee as well as the Traverse. Powers Oil Co. is reported to have abandoned its No. 1 Begole in Flint Township, Genesee County, as a dry hole but plans to drill another test this summer near the city of Flint.

Flynn Oil & Gas Co.'s No. 2 Branick, NW NW NW Section 9-8n-9e, Oregon Township, Lapeer County, was estimated good for 5 to 20 bbls. from the Berea

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Eight Completions in Central Ohio Field; Nine Reported in Indiana District

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, July 16.—In the Lima Field of Northwestern Ohio, only one new well was brought in. Leister and others' test on the Ella Walton farm, Section 33, Tymochtee Township, Wyandot County, with a reported volume of 2,000,000 feet from the Trenton lime formation, depth 1,375 feet. Gregg and others' test on the David Gibson farm, Section 32, same township, is at 1,359 feet. In Crane Township, Wyanco Oil & Gas Co. is drilling on the David Fernbaugh farm, Section 2.

In Marion County, Claridon Oil Co. is drilling on the H. C. Harnhart farm, Section 11, Claridon Township, and Cottonwood Oil Co. is drilling No. 2 on the C. L. and S. A. Sinift farm, Section 11, Marion Township.

In Hardin County, Kenton Oil & Gas Co. is drilling on the John McMahan farm, Section 17, Pleasants Township.

Near Elmore, Charles Shellb, agent, is drilling a second test on the William Kuhlman farm, Section 14, Harris Township, Ottawa County.

In Seneca County, Tiffin Oil & Gas Co. is drilling on the Frank Scherger farm, Section 32, Liberty Township. R. E. Greene is due to complete No. 3 on the T. C. and B. G. Shaull farm, Section 30, same township.

CENTRAL OHIO

Eight completions were reported from the Central Ohio Field, three producers with an initial of 66 bbls., three dry holes and two gas wells. In Medina County, Ohio Fuel Gas Co.'s No. 1-5,805 on the Lena E. Myers farm, Lot 22, Lafayette Township, was a gas well in the Clinton lime at a total depth of 3,183 feet. Same company is drilling No. 1-5,829 on the D. C. Buchannan farm, Lot 17, same township, and No. 1-5,804 on the Arthur S. Clark farm, Lot 45, Medina Township. Hulse and others are drilling No. 8 on the Des Noyes Realty Co.'s land, Lot 78, same township. Ohio Fuel Gas Co. has a rig for No. 1-5,842 on the Glen A. McFarren farm, Lot 7, Homer Township, and has staked location for No. 1-5,854 on the Swastika Farms land, in Section 25, Guilford Township. Same company is drilling No. 1-5,825 on the Eliz Pifer

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Sedgwick County, Kansas, Has Promise of Two New Pools; 11 Completions in McPherson

By JAMES McINTYRE

Kansas crude oil production jumped to 135,670 bbls. per day in the past week, an increase of 5,125 bbls. per day over the preceding week.

George P. Dickey's test, north of the Robbins Pool in Sedgwick County, Kansas, which came in a couple of weeks ago at 600 bbls. naturally, producing from chat, was acidized in the past week and responded with a 1,200-bbl. production. It is No. 2 Nolan, Section 20-28-1e, and is producing from pay at 3,058-3,111 feet.

Bar-Key Petroleum Co., a Wichita group of operators, have a 500-bbl. well in their test, No. 1-A Swanson, C NE Section 6-25-2e, 11 miles north and east of Wichita in Sedgwick County. It is producing from a depth of 2,982 feet. It was not completed.

Schermerhorn and others, in Section 14-18-16w, Rush County, had sand at 3,485 feet, set 6-inch pipe at 3,495 feet, and found a gas pay at 3,497-3,515 feet. The well started at 36,700,000 feet of gas per day.

Daily Average Production

Estimated daily average production in the week ending July 14 and the preceding week was as follows:

Pool—	Barrels July 14	July 7
Hollow	10,683	10,140
Ritz-Canton	15,230	15,090
Voshell	6,885	6,215
Johnson	1,845	1,955
Sedgwick County	7,000	7,230
Nikkell	7,210	7,295
Ellsworth County	3,640	3,153
Barton County	1,375	1,153
Rice County	14,169	13,753
Reno County	5,192	4,337
Ellis County	875	555
Kingman County	1,562	1,566
Stafford County	1,509	1,565
Russell County	7,995	6,920
Greenwood County	12,750	12,250
Butler County	17,400	17,500
Other pools	20,350	19,868
Total	135,670	130,545

Stafford County

Stanolind Oil & Gas Co.'s No. 1 Denkler, CNL SW NW SW Section 10-22-12w, Stafford County, was dry and abandoned, 4 feet in the Siliceous lime at 3,880 feet, total depth. Several small shows of oil were had in the Kansas City lime topped at 3,352 feet. This was a wildcat test on a big block of acreage.

Vickers Petroleum Co. and others' No. 1 Cravens, SW SW NE Section 15-25-11w, Neola Pool discovery in the Viola lime, was drilled deeper to find a hole full of water in the Siliceous lime from 4,090-4,103 feet, total depth. It is shut down for orders.

Rice County

Garden and others' No. 1 McCracken, NE cor. Section 10-21-7w, Thode Pool, Rice County, flowed 862 bbls. in 24 hours from the chat formation from 3,358 to 3,361 feet, total depth. This is the second producer in this fairly new pool.

Gypsy Oil Co.'s No. 1 F. Malone, SE NE NE Section 30-20-9w, Sharpe Pool, had Siliceous lime from 3,340-58 feet, total depth, which carried water. It was dry and abandoned.

In the Beyer Pool, Magnolia Petroleum Co.'s No. 1 Beyer, NE NW NW Section 21-19-9w, was dry and abandoned at 3,292 feet, total depth. Siliceous lime from 3,240 feet to 3,292 feet carried a hole full of water. This well defines the Beyers Pool on the southwest edge.

Continental Oil Co., Empire Oil & Refining Co. and Shell Petroleum Corp.'s No. 1 Lansing, NW SE Section 25-18-8w, a wildcat idscovery, was completed for 1,294 bbls. on the pump after a shot of acid was given the Siliceous lime from 3,132-72 feet, total depth. This well is approximately 10 miles from the nearest production.

There was one new operation to start up in Rice County the past week, it being Continental Oil Co.'s No. 2 Foote, NW SE Section 7-20-9w, Chase Townsite Pool, building rig.

Empire Oil & Refining Co.'s No. 1 Proffitt, NW SE SE Section 6-20-9w, averaged 30 bbls. of oil per hour for 8 hours from Siliceous lime, 3,265-68 feet, total depth. It had not been completed.

Gypsy Oil Co.'s No. 5 Christopher, NE SE NE Section 6-20-9w, pumped 459 bbls. in 24 hours from Siliceous lime, 3,257-66 feet, total depth. It is to be acidized.

Continental Oil Co.'s No. 1 Foote, SW NW SE Section 7-20-9w, Sharpe Pool, retook potential for 1,074 bbls. to compare with the old potential of 687 bbls. Production is from the Siliceous lime from 3,278-88 feet, total depth.

Empire Oil & Refining Co.'s No. 6 Heckel, SW NW SW of Section 18-29-9w, is showing for a Siliceous lime producer with 300 feet of oil in the hole in one hour from 3,336-43 feet, total depth. A production test had not been made.

Aylward & Trees and others' wildcat test, No. 1 Beldon, SW SE NE Section 27-20-7w, had a hole full of water in Siliceous lime from 3,715-20 feet, total depth. They were preparing to drill deeper.

In the Brandenstein Pool, Atlantic Oil Producing Co.'s No. 2 Brandenstein, C SW SE Section 10-19-10w, was a dry hole in the Siliceous lime. Lime was topped at 3,309 feet and total depth was 3,337 feet with a hole full of water.

Although the above mentioned well was a disappointment it was counteracted in a measure through the almost doubling of the potential production in No. 1 Brandenstein, C SE SE Section 10-19-10w. The potential taken in May was down to 921 bbls. with lots of water. Last week it was plugged back from 3,044 to 3,034 feet to gauge 1,897 bbls. of oil and only 100 bbls. of water.

Smith and Ash's No. 2 Beyers, NW NE NW Section 21-19-9w, found a hole full of water in the Siliceous lime from 3,295 to 3,301 feet, total depth. It was shut down at that depth.

Keith and others' No. 1 Grove, SE NW Section 29-19-9w, whihc lies between the Beyers Pool and Chase Townsite Pool, has apparently established itself in the lower category of producers, having made only 10 bbls. per hour on short tests after heavy acid treatment of the Kansas City lime from 2,932-85 feet, total depth. It is to have a pumping test. It has possibilities of Siliceous lime production with deeper drilling.

Russell County

In Russell County, Central Petroleum Co.'s No. 1 Dortland "B," NE SE NW Section 4-14-15w, pumped 990 bbls. in four days for an estimated 250 bbls. per day initial. Production is from the Oswald lime which was acidized at 3,042–90 feet, total depth, increasing production after acid treatment from 72 bbls. daily. It was completed.

Wildcat Operations in Kansas

Week Ending July 14

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Indian Territory Illuminating Oil Co.'s No. 1 George, C SE SW Sec. 12-33-10w.
Rigging up.
Lario O. & G. Co.'s No. 1 Whelan, C NW Sec. 32-31-11w.
Drlg. 3,673 ft.

BARTON COUNTY

Atlantic O. P. Co.'s No. 1 Straub, C SE NW Sec. 36-18-11w.
10-in. 2,332 ft.; drlg. 2,465 ft.
Harris & Haun and J. Brook's No. 1 Dietz, NE SW Sec. 21-16-15w.
Spudding.
National Ref. Co.'s No. 1 Ingersoll, C NW NE Sec. 2-19-13w.
T.D. 1,810 ft.; fishing.
Walter Shearen et al's No. 1 Kempler, SE NE NE Sec. 31-18-11w.
S.D. 300 ft.

BUTLER COUNTY

L. C. Hay et al's No. 1-A Bolin, SE SW SE Sec. 36-26-4.
K.C. lime 2,159-76 ft.; acidized; pump 12 bbls. daily; may abandon.

CLAY COUNTY

Seidel Bros.' No. 1 Youkers, C S½ SE NW Sec. 21-9-4.
Drlg. 702 ft.

COWLEY COUNTY

National Ref. Co.'s No. 1 Harader, NW SW NW Sec. 11-34-4.
Location.
National Refning Co.'s No. 1 Robinson, NE SE NE Section 11-34-4.
Drlg. 1,050 ft.
Roth & Farout's No. 1 Fox, SE SW Sec. 35-30-7.
Drlg. 1,150 ft.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
T.D. 2,025 ft.; S.D.

ELLIS COUNTY

Ashby et al's No. 1 Mermis, NW cor. NE Sec. 34-13-16w.
Rig.

ELLSWORTH COUNTY

Elwell et al's No. 1 Campbell, SW cor. Sec. 20-17-7w.
Location.

GREENWOOD COUNTY

Greeley et al's No. 1 Satler, SW SE SW Sec. 28-25-12.
T.D. 38 ft.; running 10-in. csg.
T. K. Simmons' No. 1 Disney, SW NE Sec. 35-22-10.
T. Mississippi lime 2,275 ft.; T.D. 2,322 ft.; H.F.W.; dry and abd.
Ward McGinnis' No. 1 Sample, NE SE Sec. 16-25-10e.
Drlg. 605 ft.

HARPER COUNTY

R. G. Berry's No. 1 Anthony, C SW SW Sec. 17-31-9w.
T.D. 4,233 ft.; fshg.

HARVEY COUNTY

Hollow et al's No. 1 Swafford, NW NE NW Sec. 8-22-1w.
Drlg. 550 ft.
Wenzel et al's No. 1 Schrag, NW SE Sec. 24-22-3w.
Rig.

KINGMAN COUNTY

W. C. McBride, Inc.'s No. 1 Wolbridge, NW SE Sec. 16-27-7w.
Drlg. 1,207 ft.

McPHERSON COUNTY

Marileen Oil and Goering Bros.' No. 1 Decker, NW cor. SE Sec. 20-18-1w.
T.D. 1,995 ft.; fishing.
Tom Palmer and Phillips Pet. Co.'s No. 1 Moddelmog, NE NE NW Sec. 8-21-1w.
Bldg. rig.

NEMAHA COUNTY

Partland & McKenna's No. 1 Sudbeck, SW NW NW Sec. 20-1-12.
Top granite wash 490 ft. T.D.; dry and abandoned.

OSAGE COUNTY

Jim Edwards' No. 1 Detrich, C NW SE Sec. 21-14-15.
Machine.

OSBORNE COUNTY

Carmen & Hershey's No. 1 Fritz, C NE NE Sec. 9-10-14w.
S.D. 700 ft.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w.
Ponds and cellar.
L. H. Wentz' No. 1 Metcalf, SE NE SW Sec. 3-24-7w.
Drlg. 3,275 ft.
Sinclair Prairie Oil Co.'s No. 1 Shepard, SE cor. NW Sec. 22-26-9w.
T.D. 4,173 ft. in Viola; small show oil; Drlg. plugs.

RICE COUNTY

Aylward & Trees' No. 1 Belder, SW SE NE Sec. 27-20-7w.
T.D. 3,720 ft. in Simpson, H.F.W.; to dpn.
Continental, Empire and Shell's No. 1 Bennett, NW SE Sec. 25-18-8w.
Siliceous lime 3,132-72 f...; T.D.; 1,193 bbls.; acidized 1,000 gals.; pump 1,294 bbls. 24 hrs.; comp.

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Stanolind Oil & Gas Co. is rigging up to drill deeper in No. 3 Oswald, NW NE NW Section 8-12-15w. Old total depth was 3,024 feet.

Tom Palmer's No. 2 Borrell, SE NE Section 2-13-14w, had Siliceous lime at 3,275-77 feet, total depth. Six-inch casing was being set at 3,227 feet.

Kingman County

There were no completions in Kingman County over the week. Skelly Oil Co. has staked a location for their No. 1 A. Conley, SW NW SW Section 20-27-10w.

Skelly Oil Co.'s No. 5 F. C. Miles, NW NE Section 30-27-10w, Cunningham Pool, Kingman County, is shut down waiting effects of acid treatment in the Lansing formation from 3,390-3,473 feet, total depth. It yielded 94 bbls. in nine hours on the swab before it was acidized.

Harvey County

Skelly Oil Co. has completed No. 1 Schmidt, SW NW Section 17-22-3w, Hollow Pool, Harvey County, for 336 bbls. on the pump. This was an old well drilled deeper from 3,455 to 3,495 feet, total depth. Hunton lime was bottomed at 3,467 feet and initialed the above after acid treatment.

The same company deepened its No. 1 Martens, SE cor. Section 19-22-3w, from an old total depth of 3,463 feet to 3,498 feet, total depth. This one potentialed 406 bbls. after an acid shot. It was also completed.

Morshead's No. 1 Townsite, 390 feet south and 30 feet east of the NW cor. Section 20-22-3w, pumped 930 bbls. in 24 hours from Hunton lime found at 3,460-78 feet. It was completed at a total depth of 3,504 feet.

New work in Harvey County consisted of the following: Skelly Oil Co.'s No. 2 Martens, 400 feet north and 253 feet west of SE cor. Section 19-22-3w. This is an old well deepened to 3,500 feet from 3,484 feet. It is shut down waiting effects of acid treatment. Magnolia Petroleum Corp.'s No. 7 Schmidt, NE SW NE Section 30-22-3w, cellar.

The Texas Co. apparently is getting a failure in No. 1 Androes, SW NW SW Section 8-22-3w, north end of the Hollow Pool of Harvey County. Wilcox sand at 3,589-96 feet, total depth, carried water and it was plugged back to the Hunton lime, 3,432-65 feet, which was shot and acidized heavily to yield only 2 bbls. of oil daily. They might resort to the chat which had a show of oil at 3,145-92 feet.

McPherson County

As usual, McPherson County took the honors with the largest number of completions of any county in the state, there being 11 wells completed and three new starts. The list follows:

Argo Gas Co. and Shell Petroleum Corp.'s No. 3 Neufeldt "B", SE SW SE Section 16-21-3w, Voshell Pool, came in for 260 bbls. of oil and 260 bbls. of water on the pump. Production was from the chat, 3,024-77 feet, total depth. Pay was at 3,072-77 feet.

T. C. Johnson's No. 1 Benson, SE SW SE Section 12-19-3w, Johnson Pool, had chat from 2,985 to 3,035 feet, gauging 3,000,000 feet of gas at 3,010 feet but carrying water in the base. It was abandoned at a total depth of 3,174 feet.

In the Ritz-Canton sector, Kanokla Oil & Gas Co.'s No. 5 Griffin, NE NW SW Section 14-19-2w, was completed for 846 bbls. on the pump after acidizing the Viola lime at 3,365-74 feet, total depth.

Offsetting the above mentioned well, McBride, Inc.'s No. 8 Griffin, NW NE

SW Section 14-19-2w, was completed for 693 bbls. on the pump. Viola lime was from 3,374 to 3,381 feet, total depth. It was acidized.

Shell Petroleum Corp.'s No. Griffin "B," SW NE Section 14-19-2w, had Viola lime at 3,355-68 feet, total depth, and was completed for 627 bbls. on pump after an acid shot.

Apex Oil and others' No. 4 Knudson, C E half W half SE Section 23-19-2w, topped the chat at 2,910 feet, pay from 2,940-54 feet, total depth, gauging 85 bbls. of oil and 8 bbls. of water in 24 hours on flow. It was a completion.

Helmerich & Payne Drilling Co. and others' No. 1-A Lovett, SW NW Section 24-19-2w, had Viola lime at 3,391-3,413 feet, total depth, which yielded only 20 bbls. of oil in 24 hours. Agitation with nitro and acid did not increase its production.

On the east side of the Ritz-Canton Pool. Phillips Petroleum Co. completed ist No. 3 Hindmarsh, NE NW SW Section 20-19-1w, for 107 bbls. on pump after an acid shot. It did not give up its production until it was acidized.

Edging off to the east fo the field, Ozark Production Co. completed No. 1-A Blair, SE NW Section 32-19-1w, for 31 bbls. of oil and 10 bbls. of water on the pump. Production is coming from the chat at 2,952-3,000 feet, total depth.

In the McPherson Pool, McPherson Oil & Gas Co.'s No. 2 Anderson, C SW NE Section 31-18-2w, was plugged back from 2,980 feet, old total depth, to 2,403 feet, at which depth it was abandoned due to failure in getting a casing shut-off.

Youker and others' No. 1-A Roseberg, NE NW Section 31-18-2w, was abandoned at 2,415 feet, total depth. Kansas City lime at 2,332-2,415 feet failed to yield anything but a small show of oil.

New operations consisted of the following: Mabee Oil Co. and Shell Petroleum Corp.'s No. 8 Friesen, C S half S half Section 33-21-3w, Nikkel Pool, rig; McBride, Inc.'s No. 4 Koehn, NE NW NE Section 33-21-3w, 15-inch casing set at 261 feet; waiting for cement to set; Jones and others' No. 3 Flook, NE SE NE Section 1-20-2w, Ritz Pool, location.

Derby Oil Co.'s No. 1 Griffin, SE SW Section 11-19-2w, pumped an average of 240 bbls. daily on a three-day test from the Viola lime, 3,375-82 feet, total depth. It was shut down after being acidized.

Shell Petroleum Corp.'s No. 4 Griffin "A," SE NW Section 14-19-2w, topped the Viola lime at 3,364 feet and at 3,369 feet, total depth, pumped 703 bbls. in 21 hours. It was then acidized and shut down.

Reno County

In the Burrton Pool of Reno County, Sinclair Prairie Oil & Gas Co.'s No. 2 Base, C NW SE Section 26-23-4w, was deepened to 3,360 feet from 3,334 feet and completed for 698 bbls. Production was 255 bbls. before acid treatment.

There was one new location staked in Reno County over the week, it being Olson Drilling Co. and Shell Petroleum Corp.'s No. 2 Sabin "B," C SW SW Section 13-23-4w.

Barnsdall Oil Co.'s No. 2 Sabin, SW NE Section 11-23-4w, swabbed 70 bbls. of oil in 2 hours from the Hunton lime, 3,553-77 feet, total depth. It had not been completed.

In the Burrton Pool, Olsen Drilling Co. and Shell Petroleum Corp.'s No. 5 Roberts, C SE SW Section 25-23-4w, had the chat at 3,260 feet and was drilling at 3,368 feet, at which depth it was flowing by heads. There was no gauge on production.

Sinclair Prairie Oil & Gas Co.'s No. 2 Base, C NW SE Section 26-23-4w, (O.W.D.D.) was deepened from 3,334 to 3,360 feet, total depth, to increase production from 255 bbls. to 698 bbls. daily after acid treatment.

The Texas Co.'s No. 2 Stucky, C NE NW Section 36-23-4w, was swabbing 4 bbls. of oil per hour with a show of water from chat at 3,266-65 feet, total depth. Pay was at 3,360-65 feet. It had not been completed.

Sedgwick County

Sovereign Oil Co.'s No. 1 Creason, SW cor. Section 6-26-1e, Sedgwick County, had the Kansas City lime at 2,552-97 feet, total depth, which responded to acid treatment for 135 bbls. of oil and 35 bbls. of water. It was completed.

First reports in Sedgwick County included Phillips Petroleum Co.'s No. 2 Nolan, SW NW SW Section 21-28-1e, building rig; Shawver Drilling Co. and Shell Petroleum Corp.'s No. 2 Nolan, NW SW NW Section 21-28-1e, building rig.

George Dickey's No. 2 Nolan, NE cor. Section 20-28-1e, topped the chat at 3,058 feet, and at a total depth of 3,111 feet flowed an average of 651 bbls. daily on a three-day test. It will be acidized for a new potential.

Butler County

Flint Hills Oil & Gas Co.'s No. 6 Martin, NW NE NE Section 27-28-4e, Butler County, was completed for 500,000 feet of gas from the Mississippi lime at 1,449-96 feet, total depth.

Butler County had one new operation to start up over the week end, it being Vickers Petroleum Co.'s No. 1-A McCranes, C E half NE SE Section 35-24-3e, drilling at 1,595 feet.

Cowley County

Dan Patton's No. 1 Hall, NW SW Section 29-31-6e, Cowley County, flowed 345 bbls. of oil from the Bartlesville sand after a 60-quart shot of nitroglycerin was given the sand at 2,930-55 feet, total depth.

T. M. Deal's No. 1 Covault, SW SE Section 22-32-4e, had sand at 3,320-30 feet, total depth, and was completed for 20 bbls.

There was one first report in Cowley County, it being Patton and others' No. 2 Sitton, SW NW Section 29-31-6e, location.

Elk County

Sherman & Austin's No. 1 Baker, NW SW Section 10-31-10e, Elk County, pumped 40 bbls. oil and 10 bbls. water in 24 hours after the Mississippi lime at 1,975-2,009 feet, total depth, was acidized. It was completed.

Elk County had one new start in Barbara Oil Co.'s No. 1 Webb, SW NW SW Section 23-31-10e, material on ground.

Greenwood County

H. A. L. Oil Co.'s No. 8 Weirshing, NW cor. Section 24-26-9e, Greenwood County, was completed for 20 bbls. on pump after acid treating the Mississippi lime from 2,125-55 feet, total depth.

Wolf Creek Oil Co.'s No. 1 Steckel, NW SW NE Section 12-25-12, was dry and abandoned at 1,667 feet. Burgess sand at 1,635-37 feet carried a hole full of water.

Greenwood County had one new location in Phillips Petroleum Co.'s No.. 6 Pixley, NW SE NW Section 10-22-10, rigging up machine.

Marion County

Youker and others' No. 4 Riffel, SE NW SW Section 11-17-4, Marion County, had the chat from 2,323 to 2,404 feet, total depth, which had only a small show of oil and it was abandoned.

Sumner County

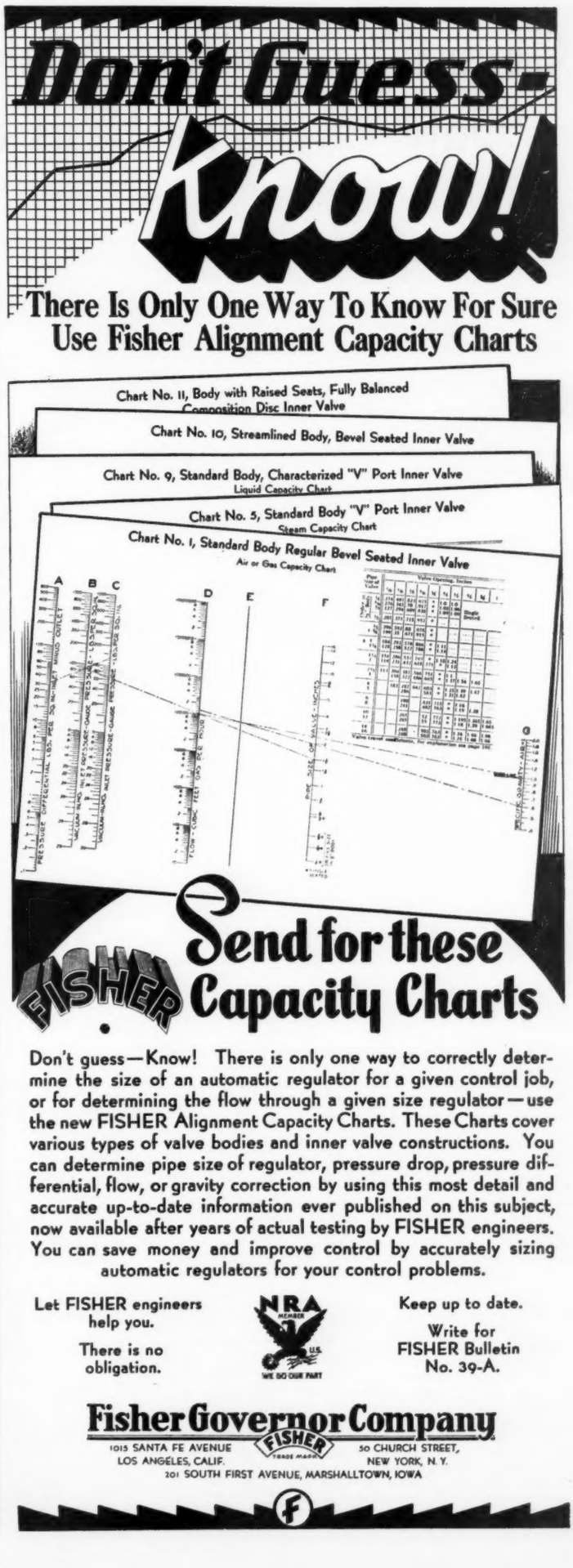
Continental Oil Co.'s No. 3 S. M. Curry, C W half NW SW Section 26-34-2, Sumner County, had an estimated 3,000,000 feet of gas at 2,160 feet, but chat formation from 3,434-98 feet yielded 100 bbls. of oil for which it was completed. It was bottomed at 3,503 feet and plugged back to 3,498 feet.

Sheedy and others' No. 1 Hassenpflug, NW NE Section 34-25-14e, Virgil Pool, was dry and abandoned at 1,604 feet. The Bartlesville sand, 1,509-19 feet, and the Mississippi lime, 1,551-1,604 feet, both being dry.

Nemaha County

Partland and McKenna's No. 1 Sudbeck, SW NW NW Section 20-1-12, Nemaha County, was abandoned at a total depth of 490 feet.

Washington County had a new operation in Rose Oil Co. and others' No. 1 Penwell, a wildcat in the NE NW SE NE Section 16-3-3. Old total depth 1,720 feet, rigging up to deepen.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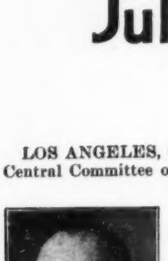
Central Committee Makes California Quotas for July on Same Basis as Was Used in June

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., July 16.—The Central Committee of California Oil Producers decided that the July quotas would be made on the same uniform method of allocation as was employed during June. Several methods of allocation were discussed before this decision was reached. For July the committee set up a schedule showing the producible allowable for the month instead of the net quota as shown heretofore. Under the net setup provision is made for the production of new wells scheduled to be finished during July. In this way it is believed that total production for the month, including production added by new completions, will be held down to the established allowable of 509,400 bbls. per day. In order to stabilize production and to give all operators an even break, the committee wiped the slate clean as far as overproduction in the past is concerned and buyers will now know the exact amount which each operator is allowed.



San Joaquin Valley fields have been given a producible allowable of 203,875 bbls. per day for July; the Coastal fields, 52,120 bbls. and Los Angeles Basin fields 205,170 bbls. daily. These three divisions make a total of 506,165 bbls. per day for the state. The allowable quota of several fields was severely reduced under the new July schedule while some others, which are more able to stand drastic curtailment, were given higher quotas. The outstanding example of this is the case of Mountain View and Kettleman Hills. The former field was reduced from 6,075 bbls. per day in June to 3,860 bbls. in July while the Kettleman North Dome field was boosted from 60,150 bbls. per day in June to 66,600 bbls. in July. There is no questioning the fact that Kettleman Hills is entitled to a larger allowable due to its high potential daily production but the opinion is expressed that Mountain View has been unduly penalized, especially in view of the fact that Long Beach was given another boost in allowable production of 2,670 bbls. per day.

Petroleum Agency

The Pacific Coast Petroleum Agency, under the supervision of W. C. Van Fleet, is rapidly becoming an important factor on the Pacific Coast and within another month or so there will be definite information as to the effect of the marketing agreement. Gasoline sales during June will not reflect the influence of the agreement as provisions of the agreement did not become effective until July 1 but sales figures for July, which will be available on August 22, should show which way the trend has been. The Pacific Coast Petroleum Agency has informed service station operators, "You must sell all gasoline at the retail prices posted by your supplier. Failure to do this may result in your supply of gasoline being cut off by the petroleum administrator."

Orders to salesmen provide that they "must not solicit the business of any refiner during the period ending September 25, 1934, for delivery either currently or subsequently to that date. Salesmen in the employ of agency members must not sell any gasoline for delivery to no brand pumps or brand any no brand pumps." Truck drivers are told: "Under no circumstances are you to make deliveries of gasoline to pumps bearing cut prices or pumps not properly posted."

It is evident from the foregoing that the agency is making a determined effort to enforce provisions of the marketing agreement. Members of the Pacific Coast Petroleum Agency, who agree to absorb excess production of gasoline and to provide ample crude oil to independent refiners, include Associated Oil Co., General Petroleum Corp., Gilmore Oil Co., Shell Oil Co., Richfield Oil Co., Mohawk Oil Co., Rio Grande Oil Co., Rocket Oil Co., Seaside Oil Co., Signal Oil Co., Standard Oil Co., Sunset Pacific Oil Co., Texas Co. and Union Oil Co.

Independent refiners who have signed the agreement include Bachmann Petroleum Co., R. R. Bush Oil Co., the Caminol Co., Edington Oil & Refining Co., Envoy Petroleum Co., Estado Petroleum Co., Exeter Oil Co., C. W. Fourl, Hancock Oil Co., Lakeview Oil & Refining Co., Macmillan Petroleum Co., the Norwalk Co., Olympic Refining Co., the Petrol Corp., Rice Ranch Oil Co., San Fernando Refining Co., St. Helens Petroleum Co., Socal Refining Co., Triangle Oil & Refining Co., Walter Steiner Co. and the Western Oil & Refining Co. The Wilshire Oil Co. did not sign the marketing agreement but has posted prices comparable with those posted by signatories to the agreement.

Tanker Shipments

Preliminary reports indicate that July will be a banner month as far as tanker shipments of crude and refined oil is concerned, although the maritime strike may reduce a large part of the projected movement to foreign and domestic ports. Approximately 1,500,000 bbls. of crude and refined oil is scheduled to be loaded for shipment to Japan during the month of July and intercoastal shipments of fuel oil and gasoline to the Atlantic Coast for domestic consumption is expected to continue at a normal level. A number of foreign tankers are being fixed for long term charters for the California to Japan run and this would indicate that this movement will continue for some time. The O. A. Knudsen has been chartered for nine voyages beginning with August and another, the British tanker Corabank, has been chartered for one year. The tanker Athelprincess has been fixed for six voyages to Japan.

It is rather difficult to estimate the amount of crude and refined products that will be moved between Pacific Coast ports for domestic consumption during July due to the maritime strike. Marketers will not be able to move any great quantity if the strike continues, as marine terminals would all be filled to capacity within a short time if marketers were unable to move gasoline from terminals to marketing stations.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	July 1		June 24			
Intercoastal-domestic—	Total this week	Dly. av.	Total last week	Dly. av.	This year to date	Same time last year
Fuel oil	357,610	51,087	339,352	48,479	8,002,122	805,661
Diesel and gas oil	68,897	9,842	.....	.....	1,000,056	1,085,064
Gasoline	4,236	605	533,916	77,702	3,559,764	4,777,509
Kerosene	11,224	1,603	.....	.....	579,421	502,970
Asphalt	70,019	10,003	.....	.....	70,019	12,179
Other finished oil	10,588	1,513	.....	.....	25,759	42,814
Other unfinished oil	.....	.....	.....	.....	.....	72,584
Foreign exports—						
Crude oil	45,541	6,506	74,797	10,685	3,792,051	3,773,689
Fuel oil	146,866	20,981	214,958	30,708	6,347,000	3,951,694
Diesel and gas oil	38,162	5,452	204,962	29,280	2,135,860	1,848,831
Gasoline	100 392	14,342	73,998	10,571	2,087,351	3,331,754
Kerosene	21,753	3,108	37,194	5,313	1,031,267	999,827
Other finished oil	.....	.....	.....	.....	2,529	12,086
Other unfinished oil	58,798	8,400	.....	.....	186,069	34,547
Coastwise-domestic—						
Crude oil	.....	.....	155,523	22,218	4,739,656	4,456,650
Fuel oil	49,741	7,106	127,719	18,246	4,550,563	5,259,307
Diesel and gas oil	.....	.....	.....	.....	385,769	748,415
Gasoline	269,180	38,454	46,127	6,590	5,284,193	6,178,407
Kerosene	.....	.....	.....	.....	81,472	108,615
Naphtha distillate	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	110,650	.....
Diesel and gas oil	.....	.....	.....	.....	448,113	280,531
Gasoline	.....	.....	73,181	10,454	145,806	500,966
Kerosene	.....	.....	.....	.....	276,412	482,430
Lubricants	8,169	1,167	.....	.....	26,500	16,400
Foreign exports—						
Crude oil	151,742	21,677	50,175	7,168	1,005,072	999,943
Fuel oil	112,713	16,102	76,142	10,877	952,504	361,366
Diesel and gas oil	103,750	14,821	35,366	5,052	818,270	584,718
Gasoline	59,760	8,537	153,950	21,993	1,788,112	2,311,554
Kerosene	96,861	13,837	25,108	3,587	499,196	552,019
Lubricants	17,349	2,478	.....	.....	89,744	76,905
Other finished oil	.....	.....	.....	.....	2,760	3,745
Other unfinished oil	.....	.....	.....	.....	5,750	19,166
Coastwise-domestic—						
Fuel oil	258,715	36,959	112,418	16,060	2,101,133	1,742,254
Diesel and gas oil	4,758	680	.....	.....	100,129	166,162
Gasoline	134,324	19.189	44,131	6,304	1,918,773	1,722,568
Kerosene	9,352	1,336	.....	.....	57,464	73,619

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Vanco Dev. Co., No. 1 Artesia, Los Angeles Co.	25- 3-12	rig	suspended
Woodward Oil Co., No. 1 Athens, Los Angeles Co.	12- 3-14	3,399	sd. sh. drilling
Houser, G. W., No. 1 Athens, Los Angeles Co.	18- 3-13	4,037	rigging up
Dominguez Oil Co., No. 1 Dominguez, Los Angeles Co.	34- 3-13	4,770	suspended
Quinn, J. B., No. 1 Dominguez, Los Angeles Co.	3- 4-13	4,587	reaming
Nudson, T. T., No. 1 Inglewood, Los Angeles Co.	17- 2-14	3,020	plug 2,370 ft.
Baldwin Oil Co., No. 1 Inglewood, Los Angeles Co.	7- 2-14	6,200	pump water
Scientia Oil Co., No. 1 Inglewood, Los Angeles Co.	7- 2-14	4,000	hd. sd. drilling
Pacific Western, No. 1 Inglewood Deep, Los Angeles Co.	8- 2-14	4,225	O. S. drilling
Plymouth Oil Co., No. 1 Inglewood, Los Angeles Co.	8- 2-14	4,930	sd. sh. drilling
Wilshire Oil Co., No. 2 Potrero Deep, Los Angeles Co.	27- 2-14	7,575	sd. sh. drilling
Community Oil Co., No. 1 Montebello, Los Angeles Co.	34- 1-11	7,447	bailing
Universal Consd., No. 1 Montebello Deep, Los Angeles Co.	5- 2-11	7,505	production test
Universal Consd., No. 2 Montebello Deep, Los Angeles Co.	5- 2-11	6,950	suspended
Universal Consd., No. 3 Montebello Deep, Los Angeles Co.	5- 2-11	7,680	suspended
Texas Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	6,943	recemented
Standard Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	6,060	hd. sd. drilling
St. Helens, No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	4,900	sd. sh. drilling
Fullerton Oil Co., No. 1 Montebello Deep, Los Angeles Co.	6- 2-11	3,500	sd. sh. drilling
Frontier Oil Co., No. 1 Pico, Los Angeles Co.	7- 2-11	1,500	suspended
Midfield Oil Co., No. 1 Pico, Los Angeles Co.	19- 2-11	4,897	cleaning out
Pressel & Tull, No. 1 Puente Hills, Los Angeles Co.	30- 2-9	3,064	cleaning out
Barstow Oil Co., No. 1 Saugus, Los Angeles Co.	35- 5-16	2,136	suspended
Barstow Oil Co., No. 2 Saugus, Los Angeles Co.	35- 5-16	rig	suspended
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34- 5-16	2,131	sd. sh. drilling
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland	3,985	redrilling
Nuoil Co., No. 1 Newport, Oranfe Co.	29- 6-10	6,455	suspended
Platt & Collins, No. 1 Costa Mesa, Orange Co.	14- 6-10	1,201	sd. drilling
Explorers Oil Co., No. 1 Fairview, Orange Co.	9- 6-10	904	suspended
Speik Oil Co., No. 1 Fairview, Orange Co.	9- 6-10	1,102	suspended
Placentia Dev. Co., No. 1 Placentia, Orange Co.	31- 3-9	4,531	suspended
Mid-Rich Drlg. Co., No. 1 Atwood, Orange Co.	26- 3-9	1,870	sd. sh. drilling
Union Oil Co., No. 1 Coyote, Orange Co.	22- 3-10	4,472	sd. sh. drilling
Bridger, J., No. 1 Coyote, Orange Co.	15- 3-10	3,703	suspended
Severns Drlg. Co., No. 3 Coyote, Orange Co.	24- 3-11	4,032	sd. sh. drilling
Great American Pet., No. 1 Chino, San Bernardino Co.	18- 2-8	2,642	suspended
Great American Pet., No. 2 Chino, San Bernardino Co.	18- 2-8	3,100	fishing D/P
Tehama Pet., No. 1 Santa Ana Canyon, San Bernardino Co.	33- 2-8	1,861	sd. sh. drilling
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	32-18-2	4,060	sd. sh. drilling

Inglewood

The Pacific Western Oil Co. is believed to have found another productive zone in the Inglewood Field of Los Angeles Basin, where No. 17 Rubel cored oil sand at 4,200 feet. There is a definite shale body between the third and fourth zones found in this well and it is assumed that two separate horizons have been found below the Rindge zone now undergoing development. No. 17 Rubel was started down to determine just how many productive zones exist in the Pliocene and to ascertain the possibility of developing commercial production in the underlying Miocene. This well will not be produced, as it is being drilled for exploratory purposes only. Standard Oil Co., which recently finished two new wells in the Rindge zone, is building new rigs for No. 71 L. A. Investment and No. 28 Vickers, and should successfully complete No. 105 Baldwin within the next 10 days.

Union Oil Co. put two wells on production in the Dominguez Field this week but neither showed substantial production. No. 29 Hellman, finished at 4,830 feet, was brought in on a gas lift and this new well tanked 357 bbls. of clean 31.2 gravity oil per day. No. 7 Callender was returned to production after having been deepened to 4,857 feet from which depth it was finished doing 450 bbls. of relatively clean 30.9 gravity oil per day. Union has staked four additional locations in this field and the entire four should begin making hole within the next 15 days. The Republic Petroleum failed to get commercial production in No. 5 Childs following its completion at 4,623 feet and the hole was plugged back to 4,075 feet. The well now is pumping water and there does not seem to be much chance of getting production.

Mountain View

Within another 60 days the potential daily production of the Mountain View Field of Kern County should be doubled as many of the wells now being drilled are located in what is considered proved territory. The Union Oil Co. has cored the Hogan zone in No. 1 Wible, an outpost located in the western part of the

field and the outlook for production is promising. The Union has several hundred acres in the western end of the field and should finish good wells during the next several months. Mountain View was given a severe reduction in allowable production for July and if another similar cut is made during August the return on invested capital will be negligible.

General Petroleum Corp. ran into a little mechanical trouble in No. 1 Berry, its deep well in the South Belridge Field of Kern County, and the company is concentrating its attention toward remedying the difficulty. The combination string of tubing stuck in this well and oil is being circulated in an effort to loosen it. If the total string of tubing is recovered the company probably will try to remove the 4¾-inch liner and thoroughly clean out the hole to bottom. It is the belief of field men that the hole should be scraped and the well allowed to blow in as it should be given every assistance due to the hydrostatic pressure of the column of fluid in the hole.

The Union Oil Co. got a wet job in No. 18 Belridge in the North Belridge Field and the hole is being recemented. The Standard is just about ready to begin drilling operations in No. 1 McPhail which was abandoned more than a year ago after the hole had been drilled to 4,528 feet. The Continental and Associated Oil Co. are each drilling a new well in the North Belridge Field but both projects are relatively shallow at present. In the Lost Hills Field of Kern County the Associated Oil Co. has gone back into No. 1 Williamson and will plug back and test by stages before abandoning the hole. This well was drilled by the Associated in conjunction with the Richfield Oil Co. but failed to show much down to its present depth, 7,858 feet, although a few minor showings were logged from time to time.

Edison

The Central Committee of California Oil Producers gave the Edison district an allowable production for the first time in July and in doing so indicated the belief that this area presents more than ordinary prospects of becoming California's next oil field. The extent and productivity of this area are still problematical but the committee has approved a plan for orderly development which provides that the umpire shall approve each future location and that operators shall not drill more than one well to the acre. The latter provision is not necessary in as much as the acreage is all held in large blocks by reputable operators. New wells are being started in this district by the Shell, Mitchell-McMillan and A. T. Jergins Trust and it is believed that at least two more wells will be started within the next 30 days.

The Mount Poso Field of Kern County will have at least five new wells under way within the next few weeks as the Union Oil Co. has staked location for four of this number and there is indication that the Shell or Texas will start at least one new well. The Framac Oil Co. is abandoning its test in Section 27-26-28 as a duster at 1,473 feet.

In the Buena Vista Lake region, the Ohio Oil Co. appears to have proven up the existence of a substantial accumulation of natural gas as the company's No. 1 K.C.L. showed a potential daily pro-

IMPORTANT NORTHERN CALIFORNIA WILDCATES

Company, well and location—	S.T.R.	Depth	Status
General Pet., No. 9 Capitan, Santa Barbara Co.	32- 5-30	2,445	Bespe drilling
Petroleum Sec., No. 1 Los Alamos, Santa Barbara Co.	6- 7-32	....	grading
Shell Oil Co., No. 3 Capitan, San.a Barbara Co.	32- 5-30	831	cleaning out
Fields, O. C., No. 1 Casmalia, Santa Barbara Co.	13- 9-35	1,260	run. casing
Fairview Oil Co., No. 1 Purisima, Santa Barbara Co.	18- 7-34	2,990	bl. sh. drilling
Barn dall-Rio Grande, No. 3 Doty Elwood, S. Barbara Co.	15- 4-29	4,868	redrilling
Signal Oil & Gas Co., No. 2 Elwood, Santa Barbara Co.	tideland	5,415	suspended
Signal Oil & Gas Co., No. 3 Elwood, Santa Barbara Co.	tideland	69	suspended
East Elwood Pet. Co., No. 1 Elwood, Santa Barbara Co.	14- 4-29	2,512	hd. sh. drilling
Advance Pet. Co., No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	suspended
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	1,049	sd. sh. drilling
Hastain & Stone, No. 1 Goleta, Santa Barbara Co.	9- 4-28	2,701	suspended
Union Oil Co., No. 2 Santa Maria, San a Barbara Co.	24-10-34	2,389	cemented
Richfield Oil Co., No. 1 Rincon, Ventura Co.	17- 3-24	2,607	recemented
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,612	redrilling
Continental, No. 3 San Miguelito, Ventura Co.	23- 3-24	4,821	hd. sd. drilling
Texas Co., No. 128 South Mountain, Ventura Co.	4- 3-19	rig	rigging up
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	1,065	hd. sh. drilling
Piru Oil Co., No. 1 Piru, Ventura Co.	14- 4-18	690	hd. sh. drilling
Williamson & Donaher, No. 1 Simi, Ventura Co.	36- 3-18	1,016	suspended
American Drlg. Co., No. 1 S mi, Ventura Co.	6- 2-17	365	cleaning out
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	3,990	sd. sh. drilling
Laing & Jacobs, No. 1 Shiells, Ventura Co.	32- 4-19	701	suspended
Kirk, W. A., No. 1 Sulphur Mountain, Ventura Co.	21- 4-22	1,954	br. sh. drilling
Mosher, J. W., No. 1 San a Paula, Ventura Co.	22- 4-21	2,113	suspended
Las Posas Pet., No. 1 Las Posas, Ventura Co.	22- 3-20	7,370	production test
International Oil Developers, No. 1 Conejo, Ventura Co.	33- 2-20	3,068	suspended
Shell Oil Co., No. 1 Gould Hills, Kern Co.	21-29-21	5,150	sd. sh. drilling
Standard Oil Co., No. 1 McKittrick, Kern Co.	15-30-22	3,200	sd. sh. drilling
Casa Mira Oil Co., No. 1 Belridge, Kern Co.	29-28-20	4,982	suspended
General Pet., No. 1 South Belridge, Kern Co.	30-28-21	11,377	cleaning out
Union Oil Co., No. 18 North Belridge, Kern Co.	36-27-20	7,824	swabbing
Standard Oil Co., No. 1 North Belridge, Kern Co.	36-27-20	4,528	rigging up
Associated Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	7,858	to plug and test
Ohio Oil Co., No. 1 Buena Vista Lake, Kern Co.	31-31-26	5,302	6,000 MC gas
Caravel Pet., No. 1 Edison, Kern Co.	19-30-30	1,925	plug bottom
Alta Oil Co,. No. 1 Union Avenue, Kern Co.	6-30-28	6,458	plug 4,040 ft.
Mountain View Dev. Co., No. 1 Moun ain View, Kern Co.	12-30-28	4,350	D/P stuck
Gilmore Oil Co., No. 1 Mountain View, Kern Co.	24-30-28	5,768	sd. sh. drilling
Union Oil Co., No. 2 Mounta'n View, Kern Co.	23-30-28	5,562	coring
Union Oil Co., No. 3 Mountain View, Kern Co.	15-30-28	3,890	sd. sh. drilling
General Pet., No. 1 Mountain View, Kern Co.	14-30-28	959	sd. sh. drilling
Barnsdall, No. 2 Mountain View, Kern Co.	32-30-29	rig	rigging up
Hogan Pet., No. 5 Mountain View, Kern Co.	32-30-29	2,602	sd. sh. drilling
Standard Oil Co., No. 1 Mountain View, Kern Co.	19-30-29	5,843	plug 5,367 ft.
Hoyt, Otis, No. 1 Mountain View, Kern Co.	19-30-29	2,872	sd. sh. drilling
Shell Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	112	sd. drilling
Monterey Exploration, No. 2 Edison, Kern Co.	22-30-29	1,021	sd. sh. drilling
Jergins Trust, No. 1 Edison, Kern Co.	22-30-29	1,314	sd. sh. drilling
Jergins Trust, No. 2 Edison, Kern Co.	14-30-29	mtl.	building rig
Shell Oil Co., No. 1 Edison, Kern Co.	16-30-29	mtl.	building rig
Commanche Oil Co., No. 1 Commanche, Kern Co.	15-32-29	3,800	sd. sh. drilling
Tejon Ridge Oil Co., No. 1 Commanche, Kern Co.	23-32-29	412	suspended
Badger Oil Co., No. 1 Wheeler Ridge, Kern Co.	31-11-19	6,000	suspended
Russ Oil Synd., No. 1 Kingsburg, Fresno Co.	28-12-11	4,004	cleaning out
Bergman, Harry, No. 1 K ngs urg, Fresno Co.	12-12-11	6,138	fishing D/P
G. E. Dev. Co., Well No. 1, Fresno Co.	36-16-14	rig	rigging up
Western Gulf, No. 1 S. P., Fresno Co.	15-17-15	8,870	will replug
Union Oil Co., No. 1 Lillis-Ket.leman, Fresno Co.	24-21-16	10,944	pull 7-inch
Texas Co., No. 1 Alcalde, Fresno Co.	1-21-14	903	sd. sh. drilling
Mustang Oil Co., No. 1 Alcalde, Fresno Co.	8-21-13	250	suspended
Farrel Pet., Well No. 1, San Luis Obispo Co.	18-31-12	1,091	sd. sh. drilling
Willett Oil Co., No. 2 Cholame, San Luis Obispo Co.	10-25-15	931	sd. sh. drilling
Commonwealth Consd. Gas, No. 1 Tulare Lake, Kings Co.	21-22-20	1,580	suspended
Commonwealth Consd. Gas, No. 2 Tulare Lake, Kings Co.	21-22-20	rig	porta le outfit
Armadillo Oil Co., No. 1 Tulare Lake, K ngs Co.	32-22-20	1,760	recemented
Tulare Basin Oil Co., No. 1 Tulare Lake, Kings Co.	3-23-19	1,192	suspended
Tulare Basin Oil Co., No. 2 Tulare Lake, Kings Co.	2-2 -19	1,200	suspended
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-23-16	902	sd. sh. drilling
Weller, Carl, No. 1 Tulare Lake, Kings Co.	11-23-16	900	sd. sh. drilling
Trico Oil & Gas Co., No. 1 Atwell, Kings Co.	33-24-22	1,200	sd. sh. drilling
Douglas, J. M., Well No. 1, Monterey Co.	36-22-9	4,025	br. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12-3	6,760	suspended
Buttes Oilfields Co., No. 1 Marysville, Sutter Co.	35-16-1	2,721	gas—shu. in
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-16-1	4,350	andesite
Milham Explora ion Co., No. 1 Tracy, San Joaquin Co.	5- 4-5	5,670	hd. sh. drilling
Tehama Pet., No. 1 Murdock, Glenn Co.	10-22-5	620	suspended
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	4,370	sd. sh. drilling

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duction of 6,000,000 feet of gas per day from 5,302 feet after the hole had been plugged back from 7,957 feet because of mechanical trouble. The most interesting feature in connection with the test on this well is the fact that it is showing a pressure of 2,100 pounds on the casing. Shell Oil Co. has not yet encountered any oil sand in its wildcat in the Gould Hills section of Kern County but the company is still drilling ahead a little below 5,200 feet. Preliminary estimates indicated that this well might have to go down below 7,000 feet and consequently the status of the well is still the same.

Midway-Sunset

Midway Peak Oil Co. is drilling what appears to be a rather important test in the Midway-Sunset Field of Kern County and this wildcat will bear watching. The test is located in San Luis Obispo County but is at the same time an outpost in the Midway-Sunset Field. The significance that attaches to this test lies in the fact that the company has encountered the Temblor at a relatively shallow depth and also because of the possibility that the company may succeed in developing commercial production. The hole was drilled in an effort to determine whether the structure at this point was an anticline or a monocline as evidence tended to indicate the existence of an anticline at the base of the Monterey. The status of structural conditions has not yet been determined but the company bailed out about 300 bbls. of 25 gravity oil from a depth of 805 feet just previous to setting pipe. Gas pressure has been almost negligible up to the present but officials of the company believe another 500 feet of hole will change the outlook for the better. At the present depth, the well has no closure due to the outcrop to the west but there is a good indication that closure will be obtained with the addition of another few hundred feet of hole. The formation encountered is typical Temblor and the basal Monterey was so hard that the company was forced to use rock bits in order to make any impression on the formation.

Ventura Avenue

Two wells were put on production in the Ventura Avenue Field during the current week although only one of these projects was a new well. This was the Associated Oil Co.'s No. 14 Hartman which was brought in flowing 1,060 bbls. of fluid cutting approximately 20 per cent from 8,431 feet. The water is rather salty and may require further corrective measures before clean production is gained. The Shell succeeded in recompleting No. 68 Taylor in this field after plugging back the hole to 6,768 feet and returned the well to production doing 785 bbls. of 27.8 gravity oil and 600,000 feet of gas per day. The Associated and Shell have several potential producers under way in this field and some of them should be finished within the next few weeks.

The Standard Oil crew in the Goleta gas field had a job on its hands during the past week as No. 1 Chase & Brice threatened to blow out with the least provocation. The crew pumped in sufficient mud to keep it under control, however, and drilling operations were resumed. In order to keep this potential gasser under control the crew pumped in 110 pounds of mud and it looked for a time as though this might not be heavy enough. The Union has picked up a rather promising oil sand in No. 1 Moretti, a wildcat in the Santa Maria district, and the test to be made on this well may bear watching as the outlook is promising at 2,361 feet.

Long Beach

Only one well was put on production in the Long Beach Field of Los Angeles Basin during the past week, but there are still a sufficient number of incompleted drilling projects and deepening wells under way to justify the expectation that operators will make up for lost time within the next week or 10 days. The well put on production this week was the Trojan Oil Co.'s No. 1 Signal, which was returned to production pumping 198 bbls. of clean 29.7 gravity oil per day after the hole had been plugged back from 5,061 feet to 4,940 feet.

In the Huntington town lot section, the H. E. Allen trust recompleted No. 2 Willett pumping 220 bbls. of 22.5 gravity oil per day from 5,320 feet after the hole had been deepened to this point. At Santa Fe Springs, the Bandini Petroleum Co. recompleted No. 6 Off after plugging back the hole from 4,766 feet to 4,720 feet and this well was returned to production doing 338 bbls. of 33.1 gravity oil per day on a compressor.

The Santa Fe Springs Field is experiencing a revival of work following a period of inactivity due to new drilling and reconditioning work being done by a number of operators in all sections of the field. The Union Oil Co. is the most active operator in this field at the present time due to its drilling activities on the Bell lease and wth two additional rigs in course of construction it appears quite probable that this company will remain at the top of the drilling list for some time to come.

Michigan Fields

(Continued from Page 55)

sands after a shot. It was the third Berea completion in the county promising commercial production. About seven wells were nearing completion in Porter Township, Midland County.

New Locations

Eleven permits to drill were issued last week, while locations for other wildcats were announced: Porter-Midland, Gordon Oil Co.'s No. 1 Finch Sisters, NE NE NW Section 28-13n-1w, and No. 5 Muscott and others, NW NE NE Section 17; Vernon-Isabella, W. Hunter Atha's No. 2 P. Regan and W. Mahar, NE NW Section 36-16n-4w, and Old Dutch Oil & Gas Co.'s No. 2 Michael McGuire, C SW SW Section 36,; Broomfield-Isabella, Michigan Cities Natural Gas Co.'s No. 1 Roy J. Embrey, SE NW Section 3-14n-6w, No. 1 Fred Winters, SW SW Section 10, and No. 1 S. A. D. Pennington, NE NW Section 2-14n-6w; Roland-Isabella, Michigan Gas & Oil Corp.'s former No. 7 P. J. Marthey canceled and changed to No. 1 Martin Hanson, SE SE SE Section 33-13n-6w; Sherman-Isabella, Youmans-Dalton Oil & Gas Co.'s No. 1 Wheelock, C NW NE Section 31-15n-6w; West Branch-Ogemaw, Weber Oil Co.'s No. 1-B August Reinhardt, SW SE SE Section 27-22n-2e, and Muskegon Development Co.'s No. 1 Edward Kolbe, NW SW SE Section 31-15n-14w, Beaver Township, Newaygo County.

Gordon Oil Co. expects to start No. 1 Smith, Arcadia Township, Lapeer County, this week as a Berea test.

Harry Brower & Co. of Detroit are preparing to drill in Sumner Township, Section 6, Gratiot County, on the Frank Clapper farm. George Hanners will drill on No. 1 Waldo, Section 20, Watertown Township, Clinton County.

ENTERS FIFTH TERM

Dr. R. P. Anderson, secretary of the American Petroleum Institute's Division of Refining, has been re-elected secretary of Committee D-2 on Petroleum Products and Lubricants of the American Society for Testing Materials. He now enters upon his fifth term in office.

ORGANIZE TRINITY PETROLEUM

OTTAWA, Canada, July 14.—Trinity Petroleum Co. has been incorporated under Federal charter with head office at Calgary, Alberta, and authorized capitalization of 50,000 no par shares.

LEGAL

Department of the Interior. Notice is hereby given that pursuant to the act of May 23, 1934 (Public No. 248), the lands comprising Fort Morgan Military Reservation, Baldwin County, Alabama, are offered for lease for exploitation of oil and gas and other minerals, to the qualified bidder of the highest amount offered per acre as a bonus for the privilege of leasing the land. The lease will be issued under the provisions of the act of February 25, 1920 (41 Stat. 437), as amended, and the regulations thereunder, for a term of twenty years with right of renewal, on condition that drilling be commenced within three months from date of lease, at a royalty on oil ranging from 12½ to 33⅓ per cent of the production, and a rental payable annually in advance of one dollar per acre. Such lease will contain a provision requiring compliance with the Code and all acts of Congress heretofore or hereafter enacted to regulate or control the petroleum industry. The area to be leased is approximately 495.9 acres, inclusive of the tract of about 25 acres quit-claimed to the State of Alabama, which tract will be included in the lease provided the State consents thereto prior to issuance of the lease. Only sealed bids received by the Secretary of the Interior not later than 10 o'clock a. m. July 24, 1934, will be considered, the outside envelope in which the bids are enclosed to be plainly marked "Bid on oil and gas lease, Fort Morgan Military Reservation." Each bid must be accompanied by certified check on a solvent bank or postal money order for one-fifth of the bonus bid, and the successful bidder must, when required to do so, furnish evidence of his qualifications to hold a lease under the act of February 25, 1920, pay the remainder of his bonus bid and the first annual rental. Bidders are warned against violation of section 59, U. S. Criminal Code, approved March 4, 1909, prohibiting unlawful combinations or intimidation of bidders. The right is reserved to reject any and all bids. (SGD.) HAROLD L. ICKES, Secretary of the Interior.

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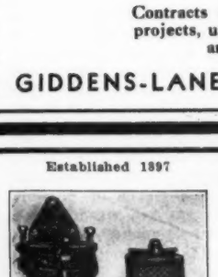

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NUGENT TRADE MARK

Eunice Completion Extends Producing Area East; Interesting Showing in Wyoming Deep Test

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., July 16.—The Atlantic Oil Producing Co.'s No. 2-B State in the Eunice area, in New Mexico, was completed for 870 bbls., extending the pool 1,320 feet to the east. The Gypsy Oil Co.'s No. 1 Bell-State, in the same pool, flowed 25 bbls. an hour on a 12-hour test. The Skelly Oil Co.'s No. 2 Turner, an edge well in the Hobbs Pool, was given another dose of acid and jumped from 240 bls. a day before treatment to 3,953 bbls. after second treatment. One new location was reported in the Eunice Pool and another in the Hobbs Pool and one well was abandoned in San Juan County.

Colorado had a good completion in the Stanolind Oil & Gas Co.'s No. 6 Parkinson, on the Iles Dome, which flowed 126 bbls. an hour on a 12-hour test.

Wyoming reported an interesting show of oil in a deep test on the West Mule Creek structure in Niobrara County, in the lower Pennsylvanian, in a well which has been drilling since 1931. Location for a wildcat on the Sheep Creek structure in Fremont County, and another for shallow oil at Oregon Basin were reported. Two completions for 10 and 15 bbls. respectively, were made in the Osage Field.

The Cut Bank Field in Montana had no new locations or completions, and interest in the southeastern area is increased by prospects for another five-mile extension of the pool. Two oil wells and one gas well were completed and one well was abandoned as a dry hole in the Kevin-Sunburst Field.

NEW MEXICO

The allocation of production for the first half of July among the Lea County Pools was as follows:

Hobbs, 34,981 bbls. daily, a decrease of 1,834 bbls. as compared with last half of June. There are 190 units of 40 acres each on production. Potential of the field on July 1 was 1,895,294 bbls., compared with 1,860,120 on June 16. Lea, 1,685 bbls. daily from 10 units, compared with 1,497 bbls. from five units on production during last half of June. Top allowable, 185 bbls. per well.

North Lea, 144 bbls. daily, compared with 169 bbls., from two units.

Jal, 3,088 bbls. daily from 27 units, compared with 3,034 bbls. from 26 units. Top allowable, 185 bbls.

Eunice, 2,824 bbls. daily from 16 units, compared with 2,598 bbls. from 14 units. Top allowable, 185 bbls.

Cooper-Lynn, 467 bbls. daily from six units, compared with 456 bbls. from five units. Top allowable, 185 bbls.

Pipe line runs for June were as follows:

Hobbs, 1,089,224; Cooper-Lynn, 7,763 bbls; Eunice, 67,706 bbls.; Jal, 84,151 bbls.; North Lea, 1,729 bbls.; Lea, 22,836 bbls.

Eunice Area

The proven area of the Eunice Pool was extended 1,320 feet to the east in the Atlantic Oil Producing Co.'s No. 2-B State, C NE SE Section 8-21-36, an east offset to the same company's No. 1-B State. It was completed at 3,941 feet, total depth, in lime, with an initial production of 870 bbls. in 24 hours from the pay topped at 3,866 feet. The top of the Terry was at 3,935 feet, and tubing was run to 3,923 feet. The elevation is 3,608 feet. No. 1-B State, which it offsets, made 1,008 bbls. initial at 3,904 feet, total depth.

The Gypsy Oil Co. has made a location for an east offset to the Atlantic's well in its No. 1 State, C NW SW Section 9-21-36.

The Gypsy Oil Co. has a near completion in its No. 1 Bell-State, C SW SE Section 8-21-36, which flowed 25 bbls. an hour on a 12-hour test. It is located between two producers, the Atlantic's No. 1-B State on the north and Tidal Oil Co.'s No. 2 Coleman on the south. Total depth is 3,929 feet, in lime. The 4¾-inch was cemented at 3,772 feet with 50 sacks.

A near completion is the Continental Oil Co.'s No. A-17 No. 3 Meyers, C SW NW Section 17-21-36, half a mile west of Tidal's No. 1 Coleman. It will mark a slight extension to the west of the proven area. It was drilled to 3,790 feet and the 2½-inch was run to 3,968 feet and is connecting up after a drill stem test at 3-808-3,950 feet. The test showed 78 joints of oil and water. The latter is believed to be drilling water. The 7-inch is at 3,809 feet.

The Texas Co.'s No. 1 Rector, C NE SE Section 30-21-36, has derrick completed, and the Ohio Oil Co.'s No. 2 State-McDonald, C NW SW Section 14-22-36, is rigging up rotary and drilling water well. The Continental Oil Co.'s No. C-20 No. 1 State, C NW NW Section 20-21-36, is waiting at 1,445 feet, total depth, after cementing the 9⅝-inch at 1,427 feet with 300 sacks, and its No. C-20 No. 2 State, C SW NW Section 20, began spudding July 1 and is bottomed at 326 feet in red rock wtih the 13⅜-inch cemented at 324 feet with 170 sacks. The Repollo Oil Co.'s No. 1 State, NE NW NE Section 19-21-36, is drilling at 3,458 feet in lime and had a show of gas at 3,190 feet.

Hobbs Area

The Gypsy Oil Co. has made a location for its No. 3 Graham, SW cor. NE Section 24-18-37, on the northwestern side of the pool, an offset on the east to Noble Brothers' No. 1 Shell-State, which came in as a big producer several months ago and extended the productive area half a mile to the west. This location and the recent completion of Noble Brothers' No. 2 Shell-State calls for an offset by the Texas Pacific Coal & Oil Co.

The Skelly Oil Co.'s No. 2 Turner, C NE NW Section 34-18-38, an edge well in the southeastern part of the field, has been turned into a good producer through treatment with acid. When first completed it made only 10 bbls. an hour. It was treated with 2,000 gallons of acid and production increased to 2,462 bbls. a day with 4,966,000 feet of gas. Last week it was retreated with 2,000 gallons and the production again was boosted, it making 3,953 bbls. of oil and 8,156,000 feet of gas in 24 hours. This well calls for an inside offset by the Stanolind Oil & Gas Co. and location has been made for its No. 8 Turner, C NW NW Section 34-18-38. This replaces No. 6 Turner, in the NW cor. of the section, for which pits were dug. The Continental Oil Co.'s No. 1 Grimes, SW cor. SE Section 28-18-38, fished out 3,000 feet of drill stem and tools and is drilling ahead at 3,850 feet. The Repollo Oil Co.'s No. 3 Grimes, SW NW NW Section 28-18-38, is drilling at 3,912 feet in lime. The Shell Petroleum Corp.'s No. 3 Berry, NE cor. SE Section 31-18-38, is drilling in sandy lime at 4,007 feet after setting the 7-inch at 3,960 feet with 250 sacks. The Gypsy Oil Co.'s No. 3 East Grimes, NW cor. NE Section 33-18-38, is waiting after cementing the 12½-inch at 300 feet.

Cooper Area

The Texas Co.'s No. 1 Ogg, C SW NE Section 35-24-36, finished rigging and shut down for water, and the Humble Oil & Refining Co.'s No. 1 Cooper, C NW NE Section 23-24-36, is rigging up rotary. The Phillips Petroleum Co.'s No. 1 Woolworth, NW cor. SW Section 23-24-36, is waiting after cementing the 12½-inch at 315 feet with 300 sacks. Same company's No. 2 Woolworth, NW NE SW Section 23; No 3 Woolworth, SW cor. NW Section 23, and No. 4 Woolworth, C SW SW Section 23, have completed derricks. The Stanolind Oil & Gas Co.'s No. 1 Meyers, SE cor. NE Section 22-24-36, is rigging up rotary at 240 feet.

Jal Area

The Continental Oil Co.'s No. 13-A No. 1 Sholes, C SW SE Section 13-25-36, is bottomed at 3,251 feet in lime. After sidetracking drill collar and bit, it lost another and is fishing. E. B. Guess and others' No. 1-B Conditt, NW NE SE Section 11-25-36, is shut down at 283 feet with a crooked hole

Lea Area

The Texas Co.'s No. 1 Lea, SW cor. NW Section 14-20-34, has finished engine repairs and is shut down for orders at 3,659 feet, and its No. 2-B Lynch, C SE SW Section 27-20-34, is installing pumping equipment after plugging back to 3,656 feet.

Eddy County

Etz, Hammond & Keyes' No. 1 State, C SE SE Section 16-17-28, Artesia area, is rigging up and drilling water well, and Tignor, Etz & Keyes' No. 1-A Keyes, C SE SW Section 10-17-28, is rigging up. Flynn, Welch & Yates' No. 68 State, NW SW NW Section 27-18-28, is drilling at 2,630 feet in gray and black lime, and R. D. Compton's No. 6 Brainard, SE cor. Section 5-18-27, is shut down for orders at 1,931 feet, in gray lime

Guess & McIntosh's No. 1 State, NW cor. Section 8-26-28, Red Bluff district, is drilling at 670 feet in anhydrite, and the Getty Oil Co.'s No. 2 Cook & Ironsides, C SW NW Section 8-20-29, Twin Mounds district, is drilling at 1,520 feet in hard gray lime.

Santa Fe County

C. C. Owens and others' No. 1 Cantwell, NW cor. Section 5-10n-9e, near Stanley, is drilling at 480 feet with a hole full of water and carrying the 10-inch. The water is coming from sand and gravel in river wash. Elmer Fisher's No. 1 Hill, Section 6-10n-7e, Barton district, is drilling in dark sand at 1,870 feet and had a show of oil at 1,850-55 feet.

San Juan County

A. R. Goodale and others' No. 1 Hare, NW NE Section 23-29-11w, Bloomfield district, was dry and abandoned at 904 feet. Frank Webber and others' No. 1, NE NW Section 22-29-11, is moving in machine. The Continental Oil Co.'s No. 36, SW cor. NW Section 12-29-19, Rattlesnake Dome, is rigging up. Nick Spatter's No. 1, C NE SW Section 32-31-11w, Aztec district, is drilling at 400 feet with 10-inch bit, and A. E. Haney's No. 1 Hare, SE SE Section 14-29-11, is running the 6⅝-inch at 630 feet. The Aztec Oil Producers, Inc, No 2, C SE SE Section 28-30-11, is fishing for tools at 1,490 feet. Meier & Culberson's No. 1 Lemley C NE Section 32-30-11, mudded the 4¾-inch at 1,310 feet, where it had a show of oil, and is bailing to test water shut-off.

Valencia County

The Western Natural Resources Corp., Inc.,'s No. 2 San Clemente, SW cor. NE Section 5-6n-1e, De Chaves district, is building derrick for rotary. M. Harris has the contract to deepen 800 to 1,000 feet from present depth of 5,155 feet.

COLORADO

The collector of internal revenue at Denver is taking steps to put into operation as fast as possible in Colorado the provisions of the Revenue Act of 1934. Notices are being sent to all porducers and purchasers of crude that they must register by July 17 and give bond of not less than $500. Producers must furnish at the time of registering legal description of producing leases, number of wells, estimated capacity and name and address of producer. The bonds are required from all producers whose premises are producing an average of more than 5 bbls. a day. The returns are for the purpose of collecting the one-tenth of one cent per barrel tax on production.

Moffat County

The Stanolind Oil & Gas Co. has completed a good producer on the Iles Dome in its No. 6 Parkinson, NE cor. Lot 37, SW Section 23-4n-92 It topped the Sundance at 3,311 feet, set the 8⅝-inch at 3,314 feet and was completed at 3,336 feet. The initial production was 126 bbls. an hour on a 12-hour test, or at the rate of 3,024 bbls. daily. It is an offset and does not prove up any new territory.

The Mountain Fuel Supply's No. 4-B Wilson, C NE NW Section 23-12-100, Hiawatha Dome, is drilling out plug after cementing the 10¾-inch at 2,304 feet. The Texas Co.'s No. 1 Van Schaick, SW cor. Section 19-12-100, is running the 10¾-inch at 1,390 feet, total depth.

Routt County

The Texas Co.'s No. 1 Sampson, SE NE SE Section 2-1s-85, King Mountain, is drilling at 338 feet in wet hole There was considerable water in hard red shale 66 to 90 feet. Same company's No. 5 Carstarphen, NW NE NW Section 5-6n-86, Tow Creek, is drilling at 3,245 feet in shale.

Jackson County

The Continental Oil Co.'s No. 3 Hoye, NW cor. NE Section 34-9n-78, South McCallum Dome, is drilling at 460 feet Manning and Terry have the contract and hole is being drilled with rotary. The Colorado Oil Refining Co.'s No. 1 North Park Coal Co., NW cor. Section 18-9n-78, North McCallum, has resumed after running pipe to 1,520 feet and is drilling at 1,800 feet.

Grand County

The Colorado Oil Refining Co.'s No. 1 Linke, NE SW SW Section 13-1n-77, Granby district, is shut down for engine repairs at 585 feet.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Section 10-29-69, Oak View, is drilling at 2,900 feet and continues to have shows of oil and gas in shale.

Park County

The South Park Oil Co.'s No. 1 Esche, SE cor. NW Section 5-9s-76, Como district, which has made no new hole for more than a year on account of a bad

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fishing job, has sidetracked tools and spear and cemented same in the wall and is now drilling out cement. Total depth is 2,465 feet.

Prowers County

The Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, is underreaming the 8¼-inch to bottom at 3,338 feet, where it will be set.

WYOMING

Niobrara County

The Interstate Oil & Refining Co.'s No. 1 Morrell, NW NE SE Section 2-39-61, West Mule Creek structure, is reported 2 feet in a sand, probably the Minnelusa, at 2,811 feet, and to have 200 to 300 feet of oil in the hole. This well was started in 1931 with the object of testing the horizon in the Pennsylvanian formation which yielded a 500-bbl. well at 3,180 feet in the Minnelusa on the East Mule Creek Dome the previous year. It is some distance below where the objective sand was expected. It was due at around 2,600 feet. At that depth it went through a saturated sand, but it was a thin horizon and apparently not the objective, or if it was the Minnelusa, there had been considerable change in the lower formations. The log did not correlate with that of the well on East Mule Creek. It was decided to go deeper to be sure it had not encountered the objective. West Mule Creek has 750 feet of closure against 300 feet for the east dome, with a syncline between. The west dome, based on horizons in the Dakota, is 600 feet higher than the east dome.

Albany County

Ohio Oil Co.'s No. 1 Chappell, C SE NW Section 28-21-76, East Rock Creek, is drilling at 3,334 feet.

Carbon County

Ohio Oil Co.'s No. 1 Morris, C NW SE Section 6-20-77, Diamond Dome, is shut down at 1,435 feet in shale. Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is drilling at 4,888 feet. Progress is slow on account of the heavy load of mud being carried and the reduced size of the hole. The Petroleum Exploration Co. of California's No. 2, SW SE SW Section 29-23-88, Buck Springs, is reported to have resumed drilling and to be making new hole at 1,950 feet. It was reported abandoned several months ago at 1,200 feet. The Sinclair-Wyoming Oil Co.'s No. 4 Wertz, SW cor. SE Section 7-26-89, Wertz Dome, is drilling at 3,515 feet.

Fremont County

Location has been made for a wildcat on the Sheep Creek structure by the Mid-American Oil Co. (Harold Nutting and associates) in its No. 1 Government, C S NE SW Section 4-28-98. It is to be a test to the Tensleep, expected at around 1,850 feet. The location is to the northwest of several tests drilled in the past. The structure, which has the Sundance at the surface, is faulted. Monongahela Oil Co.'s No. 1 Wisda, NE SE SE Section 13-28-93, Crook's Gap, is drilling at 1,800 feet.

Sublet County

Piney-La Barge Oil Co.'s No. 2, E NE NW Section 18-28-113, Dry Piney, has resumed after being shut down several months and is drilling at 120 feet. This operation is being financed by Japanese.

Big Horn County

Ohio Oil Co.'s No. 2 Byron-Union, C SE NE Section 22-56-97, Byron Dome, set the 12½-inch at 348 feet.

Hot Springs County

The California Exploration Co.'s No. 1 Government, NE SE NE Section 12-44-97, Waugh Dome, is drilling at 1,760 feet, and the Argo Oil Co.'s No. 10 Ellen, NW SE NW Section 14-44-98, Hamilton Dome, is drilling at 2,050 feet.

Park County

Henderson Producing Co.'s No. 3-H-9, C SE NE Section 31-58-99, South Elk Basin, an old well drilling deeper, was plugged and abandoned without making any new hole on account of being unable to lower the 8¼-inch for a water shutoff at 1,765 feet. Total depth is 1,780 feet.

Park County

A new operation is reported in the Oregon Basin district in the Dry Creek Oil Co.'s No. 1, Lot 2, Section 9-50n-100, in the south part of the field where there are considered good possibilities for light oil at shallow depth. Machine is being rigged up. This operation is also known as Carroll, Kirk and others. Paul Stock's No. 1 Government, SE cor. NE Section 29-51-100, is drilling at 3,350 feet.

Garland Oil Co.'s No. 2 Government, SE NE NW Section 14-56-98, Garland Dome, is moving in standard equipment after setting the 20-inch at 60 feet. The Stanolind Oil & Gas Co.'s No. 6 Rosenberg, NW cor. Section 25-58-98, Frannie Dome, is moving in materials.

Sheridan County

Sheridan Syndicate's No. 1 Allison, SW SE Section 15-55-85, Beaver Creek, has rebuilt derrick to replace old derrick which pulled in and is resuming at 1,100 feet, corrected depth.

Weston County

Homestake Oil Co.'s No. 5, C NW SE Section 13-46-64, Osage Field, was completed for 10 bols. on the pump at 1,450 feet, total depth, and the Chadron-Osage Oil Co.'s No. 6 Jones, W SW NE Section 21-46-63, in the old shallow field, was completed for 15 bbls. initial on the pump at 568 feet. The Chadron-Osage Oil Co.'s No. 4, N SW SW Section 13-46-64, is drilling at 500 feet.

MONTANA

Carbon County

Ohio Oil Co.'s No. 14 Maddox, C NW NW Section 10-7s-21, Dry Creek, is drilling at 4,250 feet.

Glacier County

There were no completoins or new locations in the Cut Bank Field the past week. Routine operations are as follows:

Alberta-Pacific Consolidated Oil Co.'s No. 4 Matson, W SW NW Section 14-34-6w, drilling at 2,675 feet. Anderson and others' No. 1 Anderson, SW cor. NW Section 26-35-6w, drilling at 2,845 feet. Annand & Hutchings' No. 1 Bonnett, NW cor. SE Section 10-32-5w, ran 6¼-inch and dropped the string and is pulling out the collapsed joints. Same firm's No. 1 Federal Land Bank, NW cor. SW Section 11-34-6w, drilling at 535 feet.

A. B. Cobb's No. 3 Walberger, NE SW SE Section 35-35-6w, topped the Colorado at 465 feet and set the 10-inch at 510 feet.

Dakota-Montana Oil Co.'s No. 3 Gilham, NE NE Section 3-34-6w, is standing at 2,947 feet, and same firm's No. 1 Winkler, C NW NW Section 26-35-6w, topped the Colorado at 500 feet and cemented the 10-inch at 585 feet.

W. M. Fulton's No. 2 Haggerty, C NW NW Section 15-34-6w, is shut down at 693 feet to finance.

Grant Oil Co.'s No. 2 Yunck, C SW SW Section 14-34-6w, is drilling at 280 feet.

Indian Oil Co.'s No. 1 fee, C SE SE Section 4-34-6w, is drilling at 2,415 feet, and its No. 1 Reikhoff, SW SE Section 3-34-6w, is standing rigged.

Montana Headlight Oil Co.'s No. 2-A Williams, C NE NE Section 11-34-6w, is drilling at 445 feet, and its No. 2 Yunck, C NW SW Section 1-34-6w, is drilling at 2,325 feet. Montana Power Gas Co.'s No. 1 Fuller, near C SE Section 17-33-5w, is running the 8¼-inch at 2,462 feet, and its No. 1 Hawkins, C SW Section 17-33-5w, is drilling at 1,800 feet. Same company's No. 1 Whetstone, C SE NE Section 7-33-5w, is drilling at 1,680 feet.

Nadeau Brothers' No. 3 Van de Mar, W SW NW Section 35-35-6w, is drilling at 2,755 feet, and Nyhagen-Bell's No. 3 Anderson, NE NW SW Section 26-35-6w, has rig on location.

Par Oil Co.'s No. 3 Haines, SW cor. Section 2-34-6w, is drilling at 2,825 feet, and the P-M-K Petroleum Co.'s No. 1 Matson, C NW NW Section 14-34-6w, is drilling at 350 feet. Last named formerly was carried as the Olive Oil Co.'s No. 1 Matson. Producers Development Syndicate's No. 1 Eniarson, SW NW NW Section 29-32-4w, landed the 6¼-inch on bottom at 2,697 feet and is testing water shutoff.

Santa Rita Oil & Gas Co.'s No. 2 Hardy, SW NE Section 27-35-6w, is drilling at 2,570 feet, and its No. 3 Whetstone, C NE NE Section 27-35-6w, is shut down at 2,160 feet waiting for new engine.

R. C. Tarrant's No. 1 Jones, C SW SE Section 31-34-5w, is drilling at 2,455 feet. The Texas Co.'s No. 4 Antrim, C Lot 3, Section 34-35-6w, is waiting on spudder at 2,918 feet to drill in, and its No. 1 Consolidated Gas Lease, 105 feet W of C Section 15-35-6w, is drilling at 2,340 feet. Same company's No. 4 Hinkle, C SE NE Section 2-34-6w, is drilling at 288 feet with rotary, and its No. 1 J. B. Kearns, W SW NW Section 23-35-6w, flowed 107 bbls. in 19 hours while drilling in. Last named is drilling at 2,845 feet. Texas Co.'s No. 2 Kearns, W NW NW Section 23-35-6w. is drilling at 1,495 feet, and its No. 1 M-358, Mabel Morrison, Lot 5, Section 22-35-6w, is standing with the 10¾-inch cemented at 565 feet. Same company's No. 4 Purdy, SW SW Section 35-35-6w, is standing with the 7-inch cemented at 2,899 feet, and its No. 1 Amos Schlag, C SW SW Section

JERGUSON

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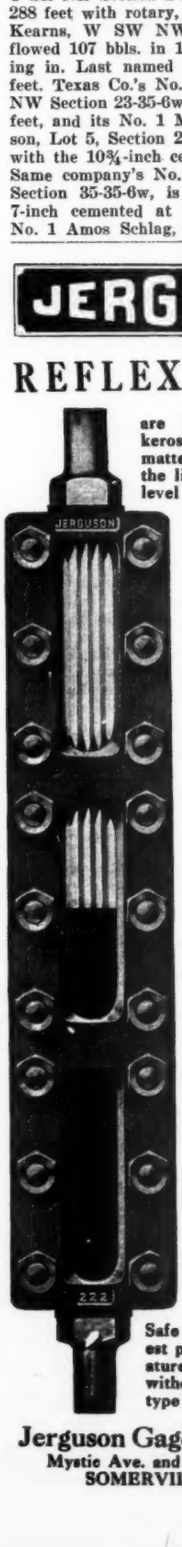

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26-35-6w, pumped 8 bbls. from sand at 2,883-2,903 feet after the second shot and will be worked over in an effort to make it a commercial producer.

Pondera County

Barmac Oil Corp.'s No. 1 Bruning, C SW SW Section 1-31-5w, is drilling at 1,265 feet. This wildcat is located 5 miles southeast of the Texas Co.'s No. 1 State in the South Cut Bank area and should it come in as a producer it will extend the Cut Bank Pool across the Marias River towards Valier. Based on the top of the Colorado, is running only 30 feet lower than the Texas Co. well. The California Co.'s No. 1 Northwestern Properties Co., SW NE SE Section 20-28-4w, North Pondera, landed the 10-inch at 2,168 feet for a water shutoff and is drilling at 2,300 feet.

Fergus County

H. Clark Rowland and others' No. 1 Woodward, SE cor. SW Section 20-14-24, Button Butte district, is drilling at 2,795 feet, where it has a show of oil.

Liberty County

J. H. Hamilton and others' No. 1 Northern Farms, C NE SW Section 10-37-5e, Flat Coulee, is drilling at 686 feet in Colorado shale.

Phillips County

A new operation in the Bowdoin gas field is the Montana Utilities Gas Co.'s No. 1 Styles, C NW NW Section 23-31-42, which is spudding at 200 feet. It is the first of several wells to be drilled to develop a gas supply for Fort Peck project in North Dakota.

Toole County

In the Devon district, Bruce P. Radigan and others' No. 1 McDonough, NW cor. Section 17-33-2e, is bottomed at 1,570 feet and swabbing and cleaning out. It had oil shows at 1,157 and 1,260 feet. C. Leonard Smith and others' No. 1 Halverson, SE Section 18-33-2e, is moving in materials, and his No. 1 Lake City, SE Section 17-33-2e, is rigging up. Thelan & Freeman's No. 1 Johnson, NW NE NE Section 29-33-2e, had 4,000,000 feet of gas at 795 feet.

In the Kevin-Sunburst Field, Lon Crumley's No. 3 Shaw, NE SE SW Section 35-36-2w, was completed at 1,619 feet for 70 bbls. initial on the pump, and the Clara Oil Co.'s No. 8 Waite, C SE NE Section 24-35-2w, was completed at 1,514 feet for 25 bbls. Goeddertz Oil Co.'s No. 4 Government, NE NW NW Section 26-35-3w, was completed for 3,000,000 feet of gas at 1,735 feet, total depth, and Buskirk and others' No. 1 McClure, SW NW NE Section 4-35-1w, was plugged and abandoned at 1,908 feet. It had sulphur water at 1,906 feet. Eagle Petroleum Co.'s No. 4 Haugen, C SW NE Section 12-35-3w, is drilling at 1,440 feet, and the Imperial Oil Co.'s No. 1, C NE NE Section 19-35-1w, is drilling at 500 feet.

Ned Cheadle and others' No. 1 Balsinger, NE SE NW Section 20-27-5w, West Pondera, is shut down at 2,160 feet for 8¼-inch pipe. At this depth it had a show for 500,000 feet of gas in a 30-foot sand in the top of the Kootenai.

UTAH

Leonora Mining & Milling Co.'s No. 1, C Section 14-9n-8w, Rozel district, north of Great Salt Lake in Box Elder County, which recently resumed after a long shutdown, is drilling at 2,280 feet. The Ramsey Petroleum Co.'s No. 1 Weightman, SW NE SW Section 18-26-7e, Last Chance district, Emery County, is drilling at 2,440 feet. In Washington County, the Escalante Exploration Co.'s No. 2, NW cor. NE Section 19-43-15, Bloomington district, is drilling at 4,050 feet, and the Arrowhead Petroleum Co.'s No. 1-A, SE SW NE Section 1-43-15, is fishing at 850 feet. Virgin Dome Oil Co.'s No. 1, NW cor. Section 16-42-14, Harrisburg district, is plugging off bottom water at 3,381 feet. In Utah County the Diamond Oil Co.'s No. 4, SE NW Section 16-8s-5e, Diamond Fork, is underreaming the 5⅞-inch for a water shutoff at 3,544 feet.

Deliveries to Refineries in Turner Valley Likely to Reach New Record in 1934

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, July 14.—Deliveries to the Calgary refineries from Turner Valley in June totaled 91,327 bbls. compared with 87,689 bbls. in May. June was the highest since March, when deliveries reached 94,723 bbls. Imperial Oil Refineries, Ltd. reported June receipts of 7,532 bbls. of clear naphtha, 70,986 bbls. of discolored naphtha and 5,592 bbls. of light crude oil, compared with 9,794 bbls. of clear naphtha, 65,391 bbls. of discolored naphtha and 5,804 bbls. of light crude in May. June deliveries of 7,216 bbls. to Bell Refining Co. compared with 6,700 bbls. in May.

Refinery deliveries from Turner Valley in the first six months of 1934 totaled 542,280 bbls., compared with 309,132 bbls. in the same period of 1933 and 401,153 bbls. in the 1932 period. The six months' figures indicate production for 1934 will ultimately establish a new record, surpassing even the peak of 1931.

Tests in Lime

In South Turner Valley, Pacalta Oils' No. 1, LSD 7, Section 28-18-2w5, is drilling more than 40 feet in the lime at 5,085 feet with a further increase in the wet gas flow, estimated 5,000,000 feet a day. Highwood-Sarcee Oils' No. 1, LSD 16, Section 21-18-2w5, is drilling at 272 feet in the deep lime at 5,620 fefet and making around 190 bbls. a day. It will be drilled 400 feet into the Madison to test the porous black lime.

Northwest Co.'s No. 1 Calgary & Edmonton-Longview, LSD 5, Section 27-18-2w5, made 147 bbls. of naphtha in seven days, or 21 bbls. a day. While the production is disappointing, after drilling 6,220 feet, that the limestone was encountered this far east materially extends the potential producing area.

In the SE cor. Section 28-18-2w5, Spooner Oils' No. 5 Anaconda, LSD 1, is drilling below 4,810 feet. Carleton Royalties' No. 1, LSD 2, same section, has spudded in. Richfield Royalties' No. 1, LSD 5, on the western edge of the same section, is below 3,500 feet. British Dominion Oil & Development Corp.'s No. 4, LSD 6, is redrilling below 1,700 feet. Publix Oil & Gas Co.'s No. 1, LSD 8, is below 4,000 feet. In the northwest corner, same section, Turner Valley Royalties' No. 1 Bell & Brown, LSD 13, is below 2,700 feet. Century Royalties' No. 1, LSD 14, is drilling in hard formation of the Dalhousie sand below 5,431 feet. In the northeast corner, Director Royalties' No. 1, LSD 16, is drilling below 3,260 feet.

Far South Tests

In the new southerly extension, Myers & Wright's No. 2 Pacalta, LSD 14, Section 21-18-2w5, is standing cemented at 573 feet. Union Freehold Oil Corp.'s No. 1, LSD 8, same section, is drilling below 3,439 feet. Northwest Royalties' No. 1 Prairie, LSD 5, is drilling below 550 feet. Highwood Royalties' No. 1, LSD 3, is in hard formation below 400 feet.

On the east side of the structure, Nolan-Hungerford Royalties' No. 1, LSD 5, Section 34-18-2w5, is rigging up rotary outfit. In the Mercury tract, Mercury Oils' No. 6, LSD 12, Section 4-19-2w5, is drilling below 2,610 feet.

In the Central Turner Valley Field, New McDougall-Segur Oil Co.'s No. 7, Section 12-20-3w5, is in hard formation around 1,600 feet.

Royalite's No. 4

Royalite Oil Co.'s No. 4, LSD 12, Section 7-20-2w5, the famous discovery well which in October, 1924, first encountered naphtha production in the Madison limestone at 3,740 feet, recently showed indications of coming back into production. In its flush production 10 years ago it made better than 500 bbls. a day on the separator. Some years ago it went off production, and a lot of time and money were spent in an unsuccessful attempt to clean it out. Recently it was decided to abandon it. When the mud was partly cleared from the hole considerable wet gas developed, and a final effort will be made to bring the well back into production.

Shareholders of Calmont Oils, Ltd., held their annual meeting at Calgary recently, when the following officers were elected: Chairman, Lord Askwith; vice chairman, Herbert Greenfield; secretary, J. Coxon; directors, Sir William Cope, Sir Francis Price, Col. A. W. Pryce-Jones, Dr. Leslie A. Maxwell, R. G. Smith, Robert Wilkinson.

Tests in the Foothills

In the forest reserve area west of Olds, Hunter Valley Oil Co.'s No. 1 McLaren, LSD 12, Section 13-31-10w5, is standing cemented at 2,841 feet.

West of the Turner Valley Field about 10 miles, Paramount Oils' No. 1, LSD 2, Section 28-18-4w5, is drilling from 100 feet in the Madison limestone. Traces of oil have been reported, but no wet gas.

South of Turner Valley, Pekisko Hills Co.'s No. 1, LSD 6, Section 6-17-2w5, on the Pekisko Hills structure, has finished casing off its gas flow and is making new hole 70 feet in the Madison.

In the old Oil City Field, Waterton Lakes Park, Oil City Royalties' No. 1 Patrick, Section 30-1-30w4, is drilling below 1,594 feet.

Comrey Test

In southeastern Alberta, Comrey Oil Co. is starting its test on the Comrey structure 80 miles southwest of Medicine Hat. Location was made last August in Section 9-1-5w4, when derrick was erected. It will spud toward the end of July.

The acreage is held by Imperial Oil, Ltd., and has been given a favorable report by Dr. T. A. Link, of the Imperial geological staff. Indications are the Ellis sand in this part of Alberta is between 200 and 300 feet thick. An agreement for development of the acreage was made last year by D. A. McDonald and associates of Vancouver, who later organized the Comrey Oil Co. to handle the test. Union Drilling Co. of Calgary will supervise the operations. This is the first well to be drilled in this portion of Alberta. A number of Calgary companies secured protection acreage when the test was announced.

Wainwright Field

In the Wainwright Field, east central Alberta, Gold Standard Oils' No. 2-A Wainwell has been cemented at 1,903 feet and will be shot in the Viking sand.

Calgary & Edmonton Corp. of Winnipeg, Manitoba, reports that oil production from its Turner Valley acreage in May amounted to 25,417 bbls. with $9,125.01 royalties compared with 22,258 bbls. and $8,739.67 royalties in the same month last year. A small additional production will be secured in June as a result of completion of Northwest Co.'s No. 1 C. & E. in Section 27-18-2w5. This well is making 21 bbls. a day with a possibility of increasing; and will likely be left on production rather than shot or given acid treatment.

British Columbia Test

Shareholders of the Okanagan Oil & Gas Co. recently decided to arrange for deepening their test in E half Section 2-26-Osoyoos Survey, standing at 2,725 feet. The directors were authorized to contract for completion to production or 4,000 feet in return for 50 per cent of production. According to Julius Rickert, geologist for the company, the well is now in the potential producing formation but requires some additional drilling.

Saskatchewan Test

In southern Saskatchewan, Pine River Petroleums' No. 1, LSD 8, Section 23-2-24w2, on the Dirt Hills structure is hauling equipment to deepen from 2,938 feet.

Alberta Surface Rights

The Alberta lands and mines department at Edmonton has issued regulations governing surface rights in connection with oil, gas and other mineral development in the province. Under these regulations no operator has the right of entry for drilling or mining or incidental operations until he has obtained the consent of the surface owner or an order of the Alberta Public Utilities Commissioners. Where the operator and the surface owner cannot reach an agreement, provision is made for an application to the public utilities commission; which, after hearing the parties shall determine the amount of surface right required for the efficient and economical development of the minerals, its exact position, and compensation payable to the surface owner. The commission's order is to be final and not subject to appeal.

Drilling in Ontario

In Lambton County, Ontario, Lew Wilson Syndicate's No. 1 deep test in Lot 1, Concession 3, Sarnia Township, near Bunyan, has finished in red shale at 2,825 feet. The test was low in the red shale and high in the big lime. No deep oil or gas was met, but the drillers will go back and shoot a small show of oil encountered in the upper sands around 600 feet.

In Euphemia Township, Laddwill Oil Co.'s No. 1 test for shallow oil near the Dawn-Euphemia line has finished dry at 641 feet.

Gasser Is Completed

In the D'Clute Field, Kent County, Ontario, Union Gas Co.'s No. 23, Lot 141, Talbot Road, Raleigh Township, has been finished at 1,558 feet. A flow of sweet gas, measuring 380,000 feet a day, was met in the upper sand, and a flow of sulphur gas, around 2,750,000 feet a day, in the lower horizon. It is one of the largest producers in the field.

In Sombra Township, west of the Dawn Field, Union Gas Co.'s No. 75 Alex Pettit farm, Lot 27, Concession 13, has finished dry at 2,175 feet.

In the Tilbury Field, Kent County, Ralph Dawson's No. 5, Lot 4, Concession 13, Raleigh Township, near Merlin, finished in the Tilbury sand below 1,400 feet with about 35,000 feet of gas and a small show of oil.

In Norfolk County, south of Tillsonburg, Prairie Oil & Gas Co.'s No. 3 Mrs. E. Stilwell farm, is good for 800,000 feet a day. Prairie Oil & Gas Co.'s No. 4, Stilwell farm, is drilling below 400 feet, and No. 5, Charles Coyle farm, is below 300 feet.

In Seneca Township, Haldimand County, near Caledonia, W. J. Hussey, drilling for a Detroit syndicate, has brought in a gasser good for 80,000 feet a day on the Walter Gowland farm near Blackheath.

Alberta Border Fields

In the Cardston district, southern Alberta, Cardston Development Co.'s No. 1 is digging cellar and unloading derrick timbers for a test for gas. The company recently acquired 8,000 acres of additional leases.

In the Keho Lake area, Hudson's Bay Oil & Gas Co. is reported preparing to abandon its No. 1 Keho, LSD 2, Section 17-11-22w4. It was drilled a couple of years ago, getting a show of oil but no commercial production in the Madison limestone. A stray oil sand in the Benton shale gave a small production, and the well has been on the pump, making a few barrels a day.

Central West Fields

(Continued from Page 55)

heirs farm, Lot 17, Westfield Township. Preston Oil Co. made a location for No. 3-1,557 on the C. A. Dauge farm, Lot 1, Litchfield Township.

In Lorain County, Ohio Fuel Gas Co.'s No. 1-5,794, John Tomes farm, Lot 63, Columbia Township, produced 6 bbls. initial. Same company is starting No. 1-5,843 on the J. T. Moon farm, Lot 23, Carlisle Township. Wittmer Oil & Gas Co. made a location on the J. J. Wargo farm, Lot 78, Eaton Township.

In Holmes County, Ohio Fuel Gas Co. is starting No. 1-5,848 on the Leo J. Haudenschild farm, Section 15, Washington Township. Wittmer Oil & Gas Co.'s No. 2 on the Desboro Campbell farm, Section 8, Ripley Township, was a dry hole at 920 feet.

In Knox County, Riley and others' No. 2 Joseph Breece farm, Lot 6, Pleasants Township, was dry at 675 feet.

In Coshocton County, Murphy Brothers' No. 4 Ward Little farm, Section 17, Perry Township, produced 55 bbls. initial at 3,081 feet. Preston Oil Co. has a rig for No. 5-1,551 on the E. R. Van Winkle farm, Section 13, same township. Ohio Gas Light & Co. is drilling No. 2 Nicholas Lower farm, Section 10, Mill Creek Township.

In Licking County, Blue Rock Oil Co. is drilling No. 3 Walter Hoyt farm, Section 17, Perry Township. In Muskingum County, Pure Oil Co. has a rig on the M. F. Acord farm, Section 16, Jackson Township.

In Harrison County, the Pittsburg Co. drilled a dry hole at 1,186 feet on the S. B. Reeves farm, Section 10, Freeport Township.

Stark County

In Stark County, East Ohio Gas Co. has a rig on the Catherine Schumacher farm, Section 21, Plain Township, and is moving in tools for No. 3 Charles Pontius farm, Section 16, same township. Same company is drilling below 4,100 feet in No. 2 on the Hoover Development Co.'s farm, Section 9. Brendel Producing Co. is drilling below 3,600 feet in No. 1 E. and J. Graber farm, Section 14. Cunningham Natural Gas Co. is drilling around 3,500 feet in No. 1 F. and A. Willaman farm, Section 17, Plain Township. White and others are drilling below 4,350 feet in No. 1 James M. Snyder farm, Section 23, Perry Township.

In Lawrence County, Ohio Fuel Gas Co.'s No. 1-5,801 on the J. B. Benson farm, Section 20, Union Township, is a gas well at a total depth of 2,861 feet.

In Guernsey County, C. C. Wharton's No. 3 R. E. Frame farm, Lot 1, Willis Township, produced 5 bbls. initial. R. E. Scott is drilling on the McPeak and others farm, Lot 20. Ferguson & McCullough are drilling No. 4 Fred A. Foraker farm, Lot 21, same township. J. T. Roach is drilling No. 2 Sadie House farm, Lot 20, and J. T. Roach is drilling No. 2 E. L. Frame farm, Lot 5, same township. Gordon Oil Co. is drilling No. 1 Howard H. and Pearl Scott farm, Section 36, Oxford Township. E. C. Quillan & Co. are drilling No. 2 Anna Shearer farm, Section 5, Monroe Township. George Jewell is drilling No. 1 Carl Weaver farm, Section 5, same township, and No. 1 Claude Evans farm, Section 18, Center Township.

In Belmont County, William Patton and others' No. 15 on the Ernest J. Pefer farm, Section 34, Somerset Township, is a gas well at a depth of 1,730 feet with an oil showing. It will be given a shot.

In Athens County, E. N. Williams staked a location on the John E. Hill farm, Section 34, Berne Township.

INDIANA

Nine completions were reported from the Indiana Field, two oil wells, with initial of 45 bbls., two gas wells and five dry holes.

In Gibson County, M. G. Powell and others' No. 1 A. F. Dugan farm, SW SW Section 14, Patoka Township, was dry and abandoned. Nelson, Douglas and others have started No. 1 Mary W. Schutz, SW SE Section 9, Patoka Township, 400 feet from the south line and 250 feet from the west line of the farm. In Washington Township, C. P. Shoultz has started No. 2 James Armstrong Heirs, Donation 108. Big Four Oil & Gas Co. is drilling No. 8 on the Catherine Sloan farm, NW SW Section 18, Washington Township. George W. Porter is drilling No. 1 J. E. Tope farm, NE NE Section 14, Patoka Township. Gib Van Oil Co. is drilling No. 2 G. W. Schoulty farm, Section 18, same township.

In Pike County, Rendall & Strouble are starting No. 1 on the Ella Miller farm, SW SW Section 14, Logan Township, in the southwest corner of the farm. In Washington Township, Claude Nobel drilled in a nice gas well in No. 2 on the Edward Adams farm, NW NE Section 20. In Clay Township, Indiana Southwestern Gas Corp. is drilling in the SW NE Section 32, Clay Township.

In Sullivan County, Pierson, Yeager and others are drilling No. 1 on the Ellery D. Hayden farm, Section 10, Turman Township, and Charles W. Whitlock and others' No. 1 on the W. D. Medsker farm, Section 24, same township, is shut down at 1,300 feet. In Fairbanks Township, M. V. Yeager is shut down at 1,900 feet in No. 1 Link A. Morris farm, NW Section 8, and Yeager and others are shut down in No. 1 on the John Hunt farm, Section 6, same township, at 1,500 feet.

In Hancock County, J. Harvey Snyder drilled in a nice gas well on the L. T. Bowman farm, SW Section 28, Brandywine Township, at a depth of 975 feet. Same party is drilling No. 1 Richard Milburn farm, Section 17, same township.

In Dubois County, F. L. Damron is drilling in the northeast corner of the Albert Fritch farm, SE NW Section 32, Harbison Township.

In Monroe County, Ohio Oil Co. and Petroleum Exploration Co.'s test on the C. A. Kenrick farm, SW SE Section 6, produced 40 bbls. initial. Bankable Oil Co. is drilling on the Charles Shurtes farm, Section 4, Troy Township, at close to 1,200 feet.

In Knox County, Murphy Oil Co. of Pennsylvania found a dry hole in No. 5 Hamilton Like farm, SE SE Section 19, Harrison Township, O. A. Thayer & Co.'s No. 3 Alzia C. Hall farm, SW NE, Busseron Township, is drilling.

In Jay County, one of the rich oil counties in the early days of the old Indiana area, shows three wells starting: N. E. Masters' No. 1 Russell Greaf farm, NW SW Section 25, Wayne Township; Henderson and others' No. 1, SE Section 35, Noble Township, on the F. A. Greenmyer farm, and Homer Pontius' test on the Pontius farm, SW Section 13, Bear Creek Township.

In Posey County, L. R. Henley is drilling on the Lorenz Luigs farm, NW NE Section 23, Robinson Township, and struck a nice oil showing at 400 feet, but will drill deeper.

In St. Joe County, Christ Shrock is reported drilling below 2,000 feet in No. 2 Harry Sonos farm, NE SE Section 20, Harris Township.

In Vanderburg County, Center Township, the most active section of the Indiana development, Drake & Young's No. 1 William Roth farm, SE SW Section 20, is reported good for 5 bbls. Vanderburg Oil Corp. found a dry hole on the William Riggs farm, NW NW Section 3, same township. Drake & Young are drilling No. 3 Fred Kreiger farm, SW SW Section 28, same township. Royal Oil Co., Inc., is drilling No. 5 Katherine Builtman and others farm, N half NE Section 20, same township. In Scott Township, John H. McClurkin's No. 1 Grant Rowland farm, NW Section 14, was dry at 1,015 feet, and Mann & Huber drilled a dry hole on the Louis Hermein farm, SE SE Section 17, same township. In Armstrong Township, Star Drilling Co. found a dry hole on the Joe Snyder farm, NE NE Section 9. Nelson, Douglas and others are drilling on the Ben Gibson farm, NE NE Section 19, same township.

KENTUCKY

Six completions were reported from the Kentucky Field. The best well was Snowden-McSweeney Oil Co.'s No. 1 on the J. W. Peckenuagh farm, in the Matthews Pool, in Ohio County, which had an initial of 150 bbls. Cumberland Petroleum Co.'s test on the Sidney Lancaster farm, in the Roberts Pool, same county, produced 50 bbls. initial, while Hupp & Duff's test on the J. W. O'Dell farm, in the Matthews Pool, was reported dry at 340 feet.

In Hancock County, Joseph B. Mayer's No. 3 on the J. W. Matthews farm produced an initial of 100 bbls.

Of late the bulk of the completed work in the Kentucky Field is centered in Ohio and Hancock. Henderson, Muhlenberg, Daviess and McLean Counties are the standby counties of the Kentucky area.

ILLINOIS

No completions were reported from the Illinois fields, only abandoned wells, all in Lawrence County. Ohio Oil Co. abandoned Nos. 1 and 3 E. S. McColby, Section 36, Bridgeport Township; No. 4 George Stoltz, same section; No. 1 Ella Cullison farm, Section 22; Nos. 7 and 21 J. E. Johnson farm, and Nos. 1, 2, 4 and 6 J. T. Griggs farm, Section 32. Big Four Oil & Gas Co. abandoned Nos. 3, 5, 7 and 10 G. L. Dunlap farm, Section 31, same township. In Petty Township, Ohio Oil Co. abandoned No. 3 H. W. Hostetter farm, Section 20, and No. 4 on the A. R. Applegate farm, Section 12, Petty Township.

Sale of 1,034 Wells

Another large deal in producing wells in the old Lima Field was made during the week. Sale of 1,034 oil producing wells in Hancock, Allen and Mercer Counties to Carl H. Schwyn, Cygnet, Ohio, was reported by officials of the Ohio Oil Co., which recently sold 2,546 other wells in Northwestern Ohio to Mr. Schwyn. The wells include all owned by the Ohio Oil Co. in Northwestern Ohio. Mr. Schwyn is president of the Cygnet Savings Bank.

The new purchase, effective July 1, gives Mr. Schwyn about 4,000 producing wells and makes him probably the most important independent operator in Ohio. The wells have a total production of 250 to 300 bbls. daily, according to reports.

Fourteen of the 64 employes on leases involved in the deal are eligible for retirement and the 50 others will be retained by Mr. Schwyn.

The Ohio Oil Co. will concentrate its production efforts on its large holdings in eastern and southern Ohio, Texas, Oklahoma, Louisiana and Wyoming.

Every length individually inspected and hydrostatically tested . . .

ALLEGHENY STEEL PIPE

LAPWELD PIPE . . . . . SEAMLESS TUBING

ALLEGHENY STEEL COMPANY
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Sales Offices and Warehouse Stocks in the principal cities
ALLEGHENY PRODUCTS SHEETS for Automobile Bodies, Metallic Furniture, Deep Drawing . . . ALLEGHENY METAL . . . ALLEGHENY ALLOYS . . . ELECTRICAL SHEETS . . . STEEL CASTINGS . . . SEAMLESS TUBING . . . BOILER TUBES . . . PIPE

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Refining Natural Asphalt and Blown Petroleum Asphalt

What is the refining process that is used for (a) natural asphalt and (b) blown petroleum asphalt?—C. E. J.

The commercial deposits of natural asphalts, such as the material found in Trinidad and Venezuela, furnish a product that requires but little treatment. The most objectionable impurity is water, which may be emulsified with the asphalt, clay and other mineral matter. The process of purification is termed dehydration, in which the native asphalt is heated in a suitable vessel. Direct fire, steam coils, hot oil circulated in coils, or circulation of the hot melted asphalt, being the mediums employed. In some plants jets of dry steam or air are directed into the hot asphalt to hasten the removal of the water. Vegetable matter, sticks, and any material that will float are skimmed off while the asphalt is in the liquid state. Heavy mineral substances settle to the bottom. The purified asphalt is drawn off from a suitable level.

Petroleum asphalts are residuals usually obtained from asphaltic or semiasphaltic crude oils. A small quantity is obtained from nonasphaltic, or paraffin, oils as a result of the cracking operation. The essential condition is that the oil is sufficiently reduced, the more volatile substances having been removed by distillation, and then blown with air while held at a high temperature.

Abraham's Asphalts and Allied Substances is a recognized authority on all things relating to the occurrence, production, uses and properties of asphalt. He discusses in detail the methods used for making blown petroleum asphalt and the following is quoted from pages 333 and 334, third edition.

"According to present practice, the residual oil is blown at 525 to 575° F. at the rate of 30 to 50 cubic feet air per minute, per ton of asphalt, for a period of 5 to 12 hours. It is found unnecessary to use any of the catalyzers referred to in the earlier patents. The air may either be blown through the still under pressure, or else sucked through the still by subjecting the contents of the still to a partial vacuum. There are proponents of both systems. The loss depends upon the amount of volatile matter contained in the residual oil, and varies from practically 0 up to 10 per cent of the weight of the charge, depending of course upon the extent the product is blown. It is contended that the vacuum process removes the oily and greasy matters from the residual oil and forms a brighter and cleaner looking blown asphalt. The more asphaltic the crude from which the residual oil was derived, the better will be the quality of the blown product, and the shorter the duration of the blowing process. Residual oils derived from semiasphaltic and nonasphaltic petroleums must be blown longer to obtain a product of the same fusing point and the blown asphalt is apt to appear quite oily and greasy. The best blown asphalts are produced from the following petroleums, viz.: U. S. Gulf Coast Field; Mexican heavy viscous crudes of 8 to 15 degrees gravity obtained from the Panuco and Topila regions, also from the Ebano region; Venezuela crudes from the Lagunillas, La Roza and Mene Grande Fields; Colombian crudes from the Barranca-Bermeja region; likewise from Trinidad crudes.

"Mid-Continent semiasphaltic petroleums form residual oils which when blown at 450 to 475° F. for 9 to 10 hours, produce blown asphalts having a fusing point of 350 to 400° F. and without the formation of free carbon."

Steam Cylinder Oils Suitable for Refinery Pumps

What are the characteristics of a steam cylinder oil suitable for refinery pumps and of what is it made? Can you give me a source of good information about lubricants and lubricating problems in general?—B.

Cylinder oil is the residue obtained after the gas oil and a portion of the wax distillate has been removed from a suitable crude oil. This oil is known by various other names, such as steam cylinder oil, reduced stock, cylinder stock, heavy oil, steam refined cylinder stock, etc. When reducing the oil a large quantity of steam is run into the still for the purpose of preventing cracking.

Cylinder oils have a high flash, usually above 500° F., and a firepoint of many of these oils exceeds 600° F. There is a wide range in viscosity; from about 30 to over 200 Saybolt Universal at 210° F., being frequently found in the finished oil. Some types of crude oils are processed to even higher viscosities.

It has been shown that cylinder oils blended with the proper kind and quantity of fixed oil give more satisfactory service, when in contact with steam, than the pure mineral oils. Such oils are called compounded oils. Animal or vegetable oils and fats may be used for compounding. The quantity of fixed oil or fat added to the mineral oil may range from 1 per cent to about 15 per cent.

The compounded cylinder oil is especially adapted for lubricating steam pumps used in refineries where the steam pressures are so often quite low and moisture has a tendency to promote the formation of emulsions. A mixture of water and oil is not a good lubricant under the conditions, so if something is present to combine with the water an emulsion is formed and therefore a bad condition corrected. It is the common practice to use acidless tallow or tallow oil for this kind of compounding. Degras and card oil are also used. Compounded oils resist the action of moisture, reduce consumption, improve atomization, form a firm surface film and consequently reduce friction and wear. Excessive compounding is objectionable, because deposits and sludges may form to give trouble.

The following is from Practice of Lubrication, by Thomsen, page 387.

"Acidless tallow oil and not tallow is generally used for compounding cylinder oils, because tallow is often acid or rancid and therefore inferior to acidless tallow oil. Tallow and black lead used to be a favorite cylinder lubricant at sea, when steam pressures were low, but with the advent of higher steam pressures such mixtures have almost disappeared. Yet it is not infrequent to find engine operators in the habit of using tallow indiscriminately, particularly under wet steam conditions; it keeps the engine quiet and makes the cylinder oil last longer. The acidity produced by decomposition of the tallow will, however, in time act most destructively on all cast-iron surfaces. A symptom often exhibited is that the acid 'perforates' the skin on the piston rods. the rod becomes pitted and wears badly. It also causes deposits inside the valve chests and cylinders, composed chiefly of iron soaps and may soon cause sufficient corrosion and pitting to ruin the surfaces after a comparatively short life.

"Cast-iron, long exposed to the action of fatty acids from tallow becomes so crumbly that it can be cut with a knife like cheese. The metal is porous and filled with iron soaps, etc., which explains why it is so exceedingly difficult to introduce an oil, largely mineral in character, where tallow (or for that matter any fixed oil, such as rape oil—Colza—occasionally favored by engine drivers for troublesome engines), or cylinder oils containing a large percentage, say 20 per cent—25 per cent or more of tallow, tallow oil, or other fixed oil, have been in use for a long period.

"The only way is to introduce the oil very gradually mixed with the old lubricant over a period of at least three months, gradually increasing the percentage so as to give the acid products of decomposition time to loosen, dissolve and get cleared away through the exhaust. If the oil is introduced too quickly, it will dissolve the deposits too rapidly, with the result that excessive scoring and wear inevitably take place, and a return to the old lubricant becomes necessary if the engine is not to suffer more serious damage."

The above mentioned book is reliable reference. This may be obtained through our Book Department for $6.

Lubricants for Compressors in Making Liquid Hydrocarbons

We are using C.P. glycerin as a lubricant in our gas compressors when making liquid hydrocarbons, butane, iso-butane, propane, as we find it can be readily separated from the finished product. We have used various grades of ordinary lubricating oils but have always been troubled with them carrying over and forming a residue in our product. We find glycerin expensive and wondered if you could suggest any other lubricant which would be less expensive.—T. C. J.

There are several things that are used for lubricating compressors working at low temperatures. Among the several lubricants used are:

1. High grade, fully refined, low pourpoint pale lubricating oil ranging from 200 to 300 Saybolt Universal viscosity at 100° F.

2. A similar oil is used as under 1, the oil being circulated to a sump, where any liquid hydrocarbon in solution is permitted to escape, and the oil returned to the lubricator.

3. Liquid soaps. The solution is maintained by the use of small quantities of water, or the pure soap is dissolved in a suitable lubricating oil.

4. Special liquid greases are made for the purpose, which are combinations of calcium soap and lubricating oils. These may be prepared by blending a soft cup grease with a large quantity of pale oil.

Klemgard, in "Lubricating Greases," Pages 40-42, discusses liquid greases. The following is taken from this book:

"Liquid greases to some extent replace engine and general machinery oils as well as air compressor oils. It is believed that such soap-thickened oils have lower coefficients of friction than mineral lubricating oils having equal viscosity, under the same conditions of service. In line with this view, one large manufacturer of lubricants is marketing a soap-thickened oil for the lubrication of automobile engines and other internal combustion engines. Both lead and soda soaps are being used for this service. The lead soap has small or no tendency to thicken the oil, but as little as 0.1 to 0.2 per cent of anhydrous sodium soap causes an increase of from 100 to 200 in the Saybolt viscosity of an oil of 300 viscosity at 100° F.

FORMULA FOR LIQUID GREASE

	Per cent by weight
Calcium soap (cup grease formula No. 1)	4.5
Asphalt base pale oil 180 vis. at 100° F.	28.8
Asphalt base pale oil 450 vis. at 100° F.	66.6

"Satisfactory liquid greases should contain just enough water to prevent separation of the calcium soaps but not a large excess which would cause the resulting product to be cloudy. Lime in excess of the theoretical amount required for the quantity of fat present in the grease should not be employed, as it has a tendency to cause precipitation of the lime soap. Such a grease is also more susceptible to soap separation when a portion of the moisture may become evaporated from the product in service or in storage in warm places."

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Production Records Important in Considering Reconditioning

In considering the matter of cleaning out some of my old wells here in California I have got to wondering whether the increased production will pay for the expense of the cleanout jobs. I realize that nobody can tell about that with certainty regarding any well, but it has occurred to me that you might be able to give me some information as to whether such jobs usually result profitably. I would be glad to have any suggestions as to the best methods of cleaning out also.—G. F. R.

You are quite right in saying that nobody can tell you with any great degree of accuracy how profitable or unprofitable the results of reconditioning one of your wells will be, especially if you have not kept careful production records. Such records are of the utmost importance in considering the advisability of a cleanout job.

W. C. Whaley, of the Barnsdall Oil Co. of California, who has made a special study of this subject in your state, says the reconditioning of a well is justified only when the actual cost of the repair operations will be repaid by the increase in net revenue obtained from the well as a result of increased production or as a result of reduction in lifting costs. Reconditioning is justified only if the operator is compensated with a profit for the risk attendant on such an operation.

The economic advisability of repair work is based on the expectancy that the investment will be returned within a reasonable time. The profits from reconditioning generally are much greater if the work is performed early in the life of a well, as the resulting increase in ultimate recovery usually is much larger.

Adequate and comprehensive production records must be kept to determine when reconditioning operations are justified. It is a safe assumption that many wells, particularly on large properties, are being produced at a loss unknown to the operator, due to the absence of adequate production-cost records of individual wells. It is an equally safe assumption that many wells which have been shut down as economically unprofitable could actually be produced at a profit if the facts regarding their cost and production history were known. Mr. Whaley points out that in the early life of a field little information may be necessary to determine the value of reconditioning operations, but the need for clear and complete records increases as the productivity of the producing zone decreases.

Reconditioning is hazardous when complete information is available, but the hazard of these operations is unnecessarily increased by the absence of adequate records. When well logs and histories are prepared originally they should be written with this situation in mind; and all pertinent data should be included.

The simplest and most common method of reconditioning is the cleaning out and rejuvenating of old wells by bailing and swabbing. Although dart-and-chisel bottom bailers are still used, they have generally been supplanted by suction-type bailers. The use of suction type bailers eliminates to a large degree the necessity for cable or rotary tools for the cleaning-out operation, as it makes possible the removal of hard sand bridges. Side-port bailers assist in cleaning perforations, and prevent the bailer from sticking.

Swabs equipped with relief valves have been successfully used in many instances to clean the perforations and to open drainage channels. Alternate swabbing and bailing is advisable where the well does not respond to the more simple treatment. An especially enlarged shoe or trap attached to the lower end of the suction bailer will pick up small pieces of iron. If the pieces are of such size or irregular shape that they cannot be recovered by the bailer or other common fishing tools, a recently developed electromagnet may be used.

Another method for improving the production of old wells is by means of perforation washing. Two types of perforation washers are in use, pressure type and suction type. The pressure type is designed to force fluid outward through the perforations—thus loosening the sand, mud or other material plastered between the perforated casing and the walls of the hole. The suction type of bailer attempts to draw the sand or mud into the tool itself, from which it can be entirely removed from the well. Use of both types of washers successively has been found particularly effective.

If the contemplated repair is to consist of the exclusion of water from the well, it is necessary to locate with considerable accuracy the source of the water entry. Formerly such location was based on the rather hazy methods of correlation, thief-bailer samples, and mud tests, which were not satisfactory; but more precise and accurate methods are now available.

Manufacturer's Engineers Could Give an Authoritative Answer

I am trying to hit upon the best way of determining the correct balance of load at a central power, and I am having difficulty. I wonder if you can give me some suggestions. —N. T. O.

This department's suggestion is that you give your problem to a manufacturer specializing in the design and manufacture of central power equipment and permit his engineering department to work out the solution.

It is difficult to determine in advance of installation exact balanced conditions, but the modern central power is so designed that variations can be readily adjusted after the equipment is in place. Most powers are now sold installed by the manufacturer, or a contract is let to an engineer and contractor familiar with this kind of equipment who makes the installation and starts the unit.

It is possible to make some references to articles written some years ago about central powers but it is assumed that you are interested in modern equipment and high efficiency. Generalities are likely to be misleading and should not be offered when accurate information is available from experienced engineers and manufacturers.

Intermittent Gas-Lift and How It Came to Be Found of Use

An article about recovering oil with the gas-lift refers to the "intermittent lift." I haven't been able to lay my hands on anything that tells what an intermittent lift is. Perhaps you will be good enough to explain it for me.—H. L. G.

Until relatively recent time the principal disadvantage of direct gas-lift operations lay in the fact that when a well began to approach the end of its producing life a point was reached where the formational pressure was not sufficient to maintain production and the well had to be put on the pump. This involved an entire change in the production system, with its expense, and the original plant became obsolete unless it could be transferred to another field.

The intermittent system was hit upon as a means of utilizing the original installation throughout the producing life of the field. Careful study of the subject has shown that the system can do more than this. Intermittent gas-lift, G. A. Walling points out, accommodates itself to either of two methods:

(a) Where the supply of gas to the casing is intermittent but the back pressure of the gas supply is held against the formation, i.e., the well is equipped in exactly the same manner as for direct gas-lift with the addition of an intermitter at the well-head and there is only one string of tubing.

(b) Where the gas is admitted into the annular space between two tubing strings and the oil is displaced from a bottom hole chamber equipped with a check valve to prevent the gas pressure from being exerted against the formation. This method is known as "displacement pumping."

The first method has been successfully introduced in wells still in the direct gas-lift stage and the input gas required for lifting has been considerably reduced. Wells ranging from 300 bbls. to 1,100 bbls. a day have had their input volume reduced 30 to 50 per cent. Where water encroachment is taking place the emulsion is reduced by the "slug" flow and treating costs are lowered. Where conversion from direct to intermittent lift is contemplated care should be taken in computing gas and oil measurements.

The surface-lifting efficiency may be found to have been obtained at the expense of an increased formational gas-oil ratio. The formational gas usually is taken to be the difference between the input and output volumes. The output volume from the well, however, contains gasoline vapors which have come out of solution in the flow string and the gas trap. The volume occupied by these vapors must be deducted from the total output before the true formational gas can be estimated. The stripping action of straight lift being greater than intermittent lift, a larger correction has to be made. If reduction in input volume is being obtained at the expense of an increased loss of formational energy by conversion from straight to intermittent lift, the ultimate recovery may be decreased although surface lifting costs have been reduced.

The second method — displacement pumping—has been applied to wells in the last stages of production, the maximum volume which can be lifted being from 250 to 300 bbls. a day. The point at which it is profitable to convert from direct or intermittent lift to displacement pumping will depend on local conditions. The advantages of this system are:

(1) The operation exerts no direct back pressure on the formation, and production may be obtained throughout the last stages of the life of the well. (2) Emulsification can be practically eliminated and treating costs reduced. (3) Negligible stripping of the crude can take place as the oil is lifted in a solid slug. Most of the lifting medium does not have to be recycled and the gas collecting load may be reduced. (4) The advantages dealt with in the other sections of gas-lift also apply to this system, while the disadvantages of direct gas-lift have diminished. (5) Where the lifting medium is completely exhausted from the annular space between the tubing strings after each cycle there is only one valve in the well. This may be removed easily by pulling the inner string of tubing if a "garbut" rod be used. When part of the lifting medium is retained after each cycle an additional valve is used in the bottom hole chamber.

Why Was It Called That?

GUIDE-SHOE

The guide-shoe, used in running casing, is what its name implies, a hollow shell made of various materials attached to the lower end of the pipe to serve as a guide while the pipe is being lowered into the rotary-drilled hole. This shoe protects the bottom joint of casing besides facilitating its descent down through the hole. It comes to a blunt point at its lower end, where an opening permits the further operations involved in completion of the well.

NATURAL GAS DEVELOPMENTS

Temporary Order Against Lone Star in Oklahoma

Oklahoma's supreme court has upheld a temporary order of the Corporation Commission reducing Lone Star Gas Co. rates and those of its subsidiary, the Community Natural Gas Co., in 26 states, and remanded the case for further hearing and a permanent order.

Affirming authority of the commission to demand records from the Lone Star Corp. of Pittsburgh, Pa., holding company, the commission directed that the temporary rate remain in effect until the information sought was supplied.

The temporary rate—a reduction of 10 cents per 1,000 feet to 30 cents—was ordered effective immediately with refunds of excess collections to consumers.

Commissioners should not grant a supersedeas order, the court declared, until the records of the Pittsburgh company which the commission contended were refused, are made aavilable. Then a supersedeas bond may be made, evidence heard and the rate set.

The commission alleged the Pittsburgh corporation declined to supply records on the ground the Oklahoma board had no jurisdiction over out-of-state firms. The firm furnishes materials and obtains part of its expenses from the state companies and the records are needed to set fair rates, commissioners contended.

Company attorneys declared the information had been made available for all three companies.

Justice Wayne Bayless wrote the decision in which Justices Riley, Cullison, Swindall and Welch concurred. Justices Andrews and Osborn dissented.

The opinion said in part:

"The hands of the state's rate-making body and state courts are not to be tied by artificial barriers set up in the form of holding companies, organized and kept elsewhere, which seek to reay the benefits or profits earned under rates established for public service companies in Oklahoma and at the same time deny the commission and courts information which they claim necessary to determine proper, permanent rates."

The court advised the commission it had no right to approve or disapprove contracts made by the companies, approve or veto expenditures or direct how incomes should be spent. Neither has it the power to prohibit unification of the companies involved. Justice Bayless said.

Commission officials said the decision would result in a refund of about $80,000.

Cities served by the companies include Frederick, Hastings, Hollis, Hugo, Marietta, Maysville, Mountain Park, Paoli, Ryan, Snyder, Walters, Tipton, Waurika, Wayne and Wynnwood.

Justice Osborne suggested a rehearing be held by the commission as to Community Natural Gas company rates alone.

CARDSTON GAS PROJECT

CARDSTON, Alberta, July 14.—Ratepayers of Cardston approved the granting of a natural gas franchise to the Cardston Gas and Development Co., Ltd., which must drill within 90 days and furnish gas within nine months. Location has been made for No. 1 test on the Bevans property 2 miles west. Geological investigations indicate potential gas horizons on the Cardston structure between 800 and 3,000 feet.

O. N. G. DEPEW FRANCHISE

The Oklahoma Natural Gas Co.'s bid for a 25-year franchise at Depew was successful when the city voted 142 to 6 in favor of the franchise, according to Jennings Young, Oklahoma Natural Gas official.

Landowners in Texas Panhandle File Suit for Royalty Difference on Waste Gas

AMARILLO, Tex., July 16.—The fight of Panhandle landowners against the waste of gas in the Panhandle, which a Texas Senate committee found to be 1,000,000,000 feet a day, or about enough to supply the whole United States, is in district court here on a new angle.

This involved the suit of Panhandle landowners against a group of gas companies for the difference in royalty which would have been paid to the landowners if the property had been properly marketed, and the sum they were offered for gas merely stripped of a lean natural gasoline content and blown into the air. The question involved is termed by attorneys a far-reaching one, and this test case, if successful, is held certain to be followed by a large number of others.

It is also believed that the principle may also figure in the "hot oil" war in other parts of the state, enabling landowners to recover royalty at the market price for oil from producers who have brought out illegal oil from their lands and sacrificed it on the illicit market for what it would bring.

The new suit is of a second series brought by Panhandle landowners, who are the organizers of the Panhandle Conservation Association, designed to break up the blowing of 1,000,000,000 feet of gas into the air daily. The first series of suits, now pending in the courts, attacked the constitutionality of a law which permits stripping of Panhandle gas. The committee found that the practice, if not stopped, would soon destroy the state's biggest fuel and power reserve.

The suit filed in district court here is styled W. E. Cobb et al vs. Panhandle Northern Oli Co., Paul-Tex Oil Co., and Cargray Corp.

The complaint sets out that the plaintiffs executed an oil and gas lease on 80 acres of land in Section 184, Block No. 3, I.&G.N. Ry. Co. Survey, in Carson County, title of which has come through assignment to the defendants, Panhandle Northern Oil Co. and Paul-Tex Oil Co., the lease containing the customary one-eighth royalty clause, and that beginning during November, 1933, these defendants commenced to produce enormous quantities of gas from a well on the 80-acre lease; and that during November and December, 1933, and January, February, March, April and May, 1934, the defendants produced from said well a total of 1,003,440,200 feet of natural gas; that said natural gas, "for legitimate lawful and beneficial uses had a reasonable market and intrinsic value of at least 3½ cents per 1,000 feet, or a total value of $35,120.40, one-eighth of which, amounting to $4,390.05, plaintiffs were entitled to have and receive as royalty under the terms of the lease."

The complaint sets out that the defendants have tendered to the plaintiffs only $238.47 as royalties and asks for judgment of $4,161.58 as difference in royalties due for gas produced up to and including May 31, 1934, and in addition one-eighth of the "reasonable market and intrinsic value" of all gas which defendants shall have produced from June 1, 1934, up to the time of trial of the case.

The petition alleges that the defendants, Panhandle Northern Oil Co. and the Paul-Tex Oil Co., did not apply gas produced "to any lawful or beneficial use" but delivered it to the Cargray Corp. which operates a so-called stripping plant and that the Cargray Corp. stripped from the gas "an infinitesimal quantity of natural gasoline amounting to less than thirty-one hundredths (.31) of a gallon per 1,000 feet, which constituted less than 3 per cent of its heat and economic value, and that all of said gas, after being stripped of its natural gasoline content, was by Cargray Corp. dissipated into the air, without being applied to any lawful or beneficial use, whatever."

The petition further sets out that the Cargray Corp. "wasted and dissipated into the air" the gas with the "knowledge, acquiescence and consent" of the other defendants, and that the plaintiffs "have never consented to the production, waste and dissipation of said gas and have at all times vigorously protested against such waste and dissipation."

Plaintiffs declare in the petition that they executed the lease in the belief that wells that might be drilled should be utilized for "lawful and beneficial uses that would yield the lessors, for their royalty interest in such gas, the reasonable and market value of such gas at the well." Plaintiffs contend that "under the terms of the lease the lessee and assigns have no right or authority to produce gas from any well drilled on said land for an unlawful or wasteful purpose, but are required in law to leave the gas in the well until such time as it can be utilized for light and fuel, or some other lawful purpose."

W. E. Cobb, the plaintiff, a resident of Palo Pinto County, is a member of the Panhandle Conservation Association. He also is suing as guardian of Lillie Cobb, minor. Other plaintiffs are T. E. Cobb of Swisher County, Texas; W. H. Cobb of Parmer County, Texas; Mrs. Van Bibber and husband, H. C. Van Bibber, and Mrs. Effie Robinson and husband, John Robinson, of Deaf Smith County, Texas; Mrs. Myrla Hodges and husband, C. D. Hodges, and Bruce Cobb of Carson County, Texas; Lessie Cobb of Dallas County, Texas; E. E. Cobb of Weleetka, Okla., and W. O. Cobb, Piqua, Ohio.

United Gas System's Booster Station Recently Built at Conroe

HOUSTON, Tex., July 16.—The United Gas System has just completed and put in operation a new 1,600-horsepower booster station in the Conroe Field and now is running gas through its line to Huffman station, where it ties into the company's trunk system from northeast Texas and North Louisiana to Houston.

The new line consists of approximately 20 miles of 10 and 8-inch pipe. Except for a 3-mile line serving the town of Conroe and the field fuel lines, this is the first gas outlet for the field.

The United Gas System is taking residue gas from gasoline plants in the field and also has contracted for additional supply.

Lower Rates, Higher Tax and Costs, Cut Dividend

Columbia Gas & Electric Corp. has omitted the dividend on its common stock because of rate reductions, increased taxes, higher operating costs and the need to further strengthen the corporation's cash position. The regular quarterly dividends on the 6 per cent, 5 per cent and 5 per cent convertible preferred issues, were declared, however, all payable August 15 to stock of record July 20.

The company issued the following statement.

"As a result of reductions in rates for services, inaugurated by various municipalities which involve serious curtailment of both gross and net earnings, and because of continuing increases in taxes and costs of operations no dividend was declared on the common stock at this time, the board deeming it best to further strengthen the corporation's cash position."

The earnings situation of the corporation has been complicated by demands from various municipalities for drastically lowered rates. Principal among these has been Cincinnati which last year passed an ordinance demanding a reduction in electric rates of 37½ per cent and a substantial cut in gas rates.

MICHIGAN SURVEY STARTED

MUSKEGON, Mich., July 16.—Several engineers from the U. S. Bureau of Mines arrived in Mount Pleasant last week to start a survey of the natural gas resources in conjunction with the State Public Utilities Commission and the geological division of the State Conservation Commission.

The back pressure, or Rawlins method will be used in determining the capacity of gas wells. E. L. Rawlins recently was in Michigan and determined this method, considered the most accurate, successfully applicable to Michigan fields.

The purpose of the survey is to determine whether natural gas resources now warrant any additional pipe lines or are sufficient for greater markets, over which there has been considerabe controversy among operators, geologists and engineers.

LLOYDMINSTER GAS SYSTEM

LLOYDMINSTER, Saskatchewan, July 14.—The Lloydminster Gas Co. has let contract for installation of its transmission and distributing system to Western Supplies, Ltd., of Edmonton. A. I. Payne, R. P. E. of Edmonton, is consulting engineer for the gas company and his plans have been approved.

PERSONAL PARAGRAPHS

LOUIS CHAPPUIS, who is drilling a well at Sespe, Calif., has returned from a business trip in Detroit.

* * *

R. V. SUEUR, of Toronto, vice president of Imperial Oil, Ltd., is visiting Calgary and other points in the Canadian West.

* * *

W. H. SHIELDS and family are spending a three weeks vacation in Colorado. Mr. Shields is division superintendent for the Texas Empire Pipe Line Company with headquarters in Tulsa.

* * *

E. G. DAHLGREN, chief clerk, proration office, Oklahoma Corporation Commission, Oklahoma City, Okla., is spending his vacation with his family in Wisconsin.

* * *

GALE B. DE WITT, manager, Oklahoma City office, Halliburton Oil Well Cementing Company, is combining business and pleasure in a trip to Chicago and Michigan.

* * *

R. LYMAN HEINDEL, in the special products division, Dow Chemical Company, Midland, Mich., is making a trip through the southwest in the interests of his company.

* * *

W. K. WHITE, old-time operator in the Eastern fields as well as the California and other fields, having drilled more than 400 wells, has been sojourning in Toledo, Ohio, for a short time, an annual outing where he has many friends.

* * *

ALF WEBB, JR., has returned to Talara, Peru, after spending a three months' furlough at Petrolia, Ontario.

* * *

MR. and MRS. ROBERT McGREGOR arrived in Petrolia, Ontario, recently on a three months' furlough from Negritos, Peru, where Mr. McGregor is in charge of the International Petroleum Company machine shop.

* * *

CHARLES C. BROWN, assistant umpire, Proration Department, Oklahoma Corporation Commission, is recovering from an appendicectomy performed at the Ponca City, Okla., hospital late last week and is reported to be making good progress.

* * *

A. R. HALL, chief field clerk in the Porter Field office of the Pure Oil Company, Midland County, Michigan, is spending his vacation with his monther, MRS. ANNE HALL, in Tulsa. During his absence K. A. JOCHEN has charge of the office.

* * *

D. W. HAYES, of Port Huron, was elected president of the Michigan Gas Association last week at the annual meeting in Grand Rapids. Other officers are: Vice president, D. H. FRAZER, Battle Creek; and secretary-treasurer, A. G. SCHROEDER, of Grand Rapids. WALTER E. WHITE is retiring president.

* * *

G. S. WALDEN, who has been executive vice president of the Standard Vacuum Oil Company since its organization last year, has been elected chairman of the board of the company. As chief executive officer of the company he succeeds the late W. B. WALKER. P. W. PARKER, who has been vice president of the company, has been elected president.

ALEC FIELD has been made petroleum engineer for the Texas Company and transferred to Wink, Tex.

* *

J. B. ARTHUR, manager of fuel oil and export sales of the Union Oil Company, recently completed 25 years in the service of the company.

* * *

N. G. GUIBERSON of Dallas, Tex., arrived in California last week and expects to remain on the Pacific Coast for the next month.

* * *

DONALD E. DICKEY, of Broderick & Bascom Rope Company, has been elected a member of the executive committee of the Los Angeles Section of the American Society of Mechanical Engineers.

* * *

WILLIAM H. SPICE of San Antonio, Texas, has been elected secretary-treasurer of the San Antonio Geological Society. He succeeds T. R. BANKS of the Magnolia Petroleum Company who was recently transferred to Wichita Falls, Tex.

* * *

HARRY JOHNSON, combination scout and land man for the Gulf Production Company at Midland, Tex., has returned from a trip to Duluth, Chicago and other northern points. His family will spend the summer in the north.

* * *

MIKE GRIFFITH, superintendent for the Big Lake Oil Company, with headquarters at Santa Rita, Tex., has been spending considerable time in South Texas where the Plymouth Oil Company, an associate company, is drilling a couple of tests.

ED DOYLE, chief clerk, Tulsa office proration umpire, was in Oklahoma City over the week end.

* * *

J. R. PEMBERTON, California oil umpire, and his family recently returned from a pleasure trip spent down in Mexico south of the Rio Grande.

* * *

J. S. ROSS, consulting petroleum engineer, Palo Alto, Calif., is again in the Mid-Continent district and visiting friends in Tulsa and Dallas, Tex.

* * *

H. B. SMITH, vice president of the Sinclair Prairie Oil Company, has been seriously ill in a Tulsa hospital following an operation, but is now getting along much better.

* * *

L. K. EASTMAND, formerly in charge of the Phillips Petroleum Company at San Angelo and Midland, Tex., has been transferred to Shawnee, Okla.

* * *

ANNOUNCEMENT is made of the birth at Caro, Mich., of a son to MRS. FLORA McDONALD STAUFT, widow of the late J. L. STAUFT, who was accidentally killed at Negritos, Peru, a few months ago.

* * *

J. F. DYER, manager of the gas department; A. A. EASON, auditor, and MRS. MARY E. MEISTREL, Tulsa, are moving to the Henderson Company headquarters at Amarillo, Tex. The company has holdings and a gasoline plant in Hutchinson County.

* * *

R. J. ST. GERMAIN, independent oil operator of Houston, Tex., has been in Tulsa on business, his former home.

* * *

H. E. MINOR, chief geologist for Gulf Production Company, Houston, Tex., is spending his vacation in Colorado.

* * *

R. G. BOWMAN, of the General Petroleum Corporation, Los Angeles, Calif., arrived in New York, Monday, July 16, on the Santa Paula of the Grace line.

* * *

THOMAS CALDWELL, JR., son of T. F. CALDWELL, secretary of the Roosevelt Refinery Company, is now at the Franklin Tool Company headquarters in Mount Pleasant, Mich.

* * *

JAMES H. GARDNER, president, Gardner Petroleum Company, Tulsa, has returned from a vacation at Winslow, Ark., where he and his family have been for the past few weeks.

* * *

W. HUNTER ATHA, SR., president of the Atha Supply Company, of Zanesville, Ohio, spent several days in Mount Pleasant, Mich., last week on business.

* * *

CLYDE G. GRAY, of the firm of Lytle & Gray, oil producers, returned to his office in Tulsa from a vacation in New Mexico in order that his partner, M. JOHN LYTLE might go on his vacation.

* * *

W. L. FRANKS, of Logan, Ohio, secretary of the Gordon Oil Company, is spending the month at a cottage at Crystal Lake, Montcalm County, with his family and MR. and MRS. J. W. WYKOFF. He is spending business hours in the Gordon company's office at Mount Pleasant, Mich.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

July 19, 1909

Prairie Oil & Gas Co.'s main pipe line is washed out by a flood in the Grand River in Missouri and the company is, for a short time, forced to draw on its more easterly storage and cut its runs over 20,000 bbls. per day.

Attorney General Jackson of Kansas is again trying to oust the Prairie Oil & Gas Co. from that State.

President Taft favors putting crude oil on the free list along with certain other raw materials.

Dennis F. McMahon, superintendent of the Louisiana Company, and Miss Mary Jane Shear of Jennings, La., were married on July 7 and will reside in Shreveport.

20 Years Ago

July 23, 1914

Attorney General West, of Oklahoma, has turned his attention from the Prairie Oil & Gas Co. to the Texas Co. and its subsidiaries. He asks that receivers for those companies be appointed. Mr. West says they have violated the antitrust act.

Umpire Al Watts, arbiter of the Cushing Field, has been presented with a fine automobile by Cushing operators as a mark of their esteem. All he needs is roads on which to drive it.

The Osage Indian Council refuses to renew for a period of 10 years the Indian Territory Illuminating Oil Co.'s blanket lease on the Osage Nation.

10 Years Ago

July 17, 1924

Forty-two per cent of the crude oil production of Oklahoma and North Texas fields grades 39 degrees or higher in gravity. Of the total daily production of 615,000 bbls., 263,000 bbls. will grade above 38.9 degrees.

Charles N. Gould has been appointed director of the Oklahoma Geological Survey.

Sir Richard Redmayne, British mining expert, tells the International Power Conference, in session in London, that the oil resources of the United States will be exhausted in a generation, but says our coal supply will last 2,000 years.

E. F. Woodward, president of the Republic Production Co., donates $100,000 on behalf of himself and Mrs. Woodward, to build a church for the congregation of the Church of Christ in Houston, Tex.

The principal offices of the Tide Water Pipe Co., Ltd., have been moved from Titusville to Bradford, Pa. J. E. Golden is president, and George J. Hanks, general superintendent.

H. L. HAYS, petroleum engineer with the Sinclair Refining Company at Parco, Wyo., is on vacation.

* * *

F. E. HUNTER, general manager, Apex S.A.R. Ploesti, Rumania, has been in England on a short visit.

* * *

WALTER MILLER, of Ponca City, Okla., and GEORGE OLDS, New York City, of the Continental Oil Company, were in Casper, Wyo., on company business recently.

* * *

DR. W. R. GREEN, of Drew University, professor of geology, has arrived in Cloverly, Wyo., to join the American Museum-Sinclair expedition in its hunt for prehistoric skeletons in the Big Horn Mountain country, northern Wyoming.

* * *

GENE HARPER, Franklin Tool Company store manager, and MACK McKEE, of the Roosevelt Refinery Company, both of Mount Pleasant, Mich., recently returned to Central Michigan after a trip through Ohio to Pittsburgh, Pa.

* * *

A. W. HARPER, business manager of the Yellowstone Oil Company, and MRS. HARPER, of Minneapolis, Minn., and LLOYD J. HOUSKE, of Sioux Falls, S. Dak., were in Casper, Wyo., en route to inspect holdings near Shoshoni.

* * *

B. C. COBB, of New York, who retired recently as chairman of the board of directors of the Commonwealth and Southern Corporation, entered the public utility field as an employe of the Grand Rapids Gas Light Company, Grand Rapids, Mich., later going to superintend the Detroit City Gas Company, and work for Consumers Power Company.

* * *

SIR DAVID McCOWAN, J.P., D.L., director of the Burmah Oil Company, has been made a Baronet.

* * *

W. W. MOORE, petroleum engineer for the Texas Company, has been transferred to Lea County, New Mexico, and made district manager, a new position opened in the district by the company.

* * *

H. B. HURLEY, district superintendent for the Continental Oil Company in West Texas, with headquarters at Big Spring, is now spending a little time each day in his office after a several months' illness.

* * *

DR. J. A. L. HENDERSON, consulting mining and petroleum engineer, has left London, England, for Canada and the United States on business, and is not expected to return to England until the end of the year.

* * *

H. B. SIMCOX, formerly manager of production and drilling for Continental Oil Company in California, with headquarters in Los Angeles, has been transferred to Fort Worth, Tex., to succeed GEORGE McINTYRE, who resigned July 1 to enter the operating field.

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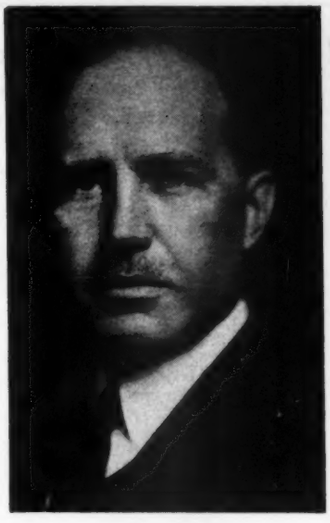
R. OGARRIO, of New York, vice president and general manager of the Texas Company; L. E. BARROWS of Fort Worth, E. R. FILLEY, Tulsa; A. R. WILSON, Denver, Co.o; R. C. STEWART, Shreveport, La., all division managers for the Texas Company, were in Houston, Tex., during the past week on company business.

* * *

PAUL J. HEGWER, petroleum engineer, Casper, Wyo., recently transferred to Washington, D. C., permanently, will be in the conservation branch, oil and gas leasing division and will be associated directly with HALE B. SOYSTER, chief of the oil and gas leasing division. HARRY V. MOFFAT, who has been connected with that office, will be transferred to Casper to assume the duties of deputy supervisor in the Rocky Mountain district about August 15.

Many Years in Foreign Oil Service

P. W. Parker, who last week was elected president of the Standard Vacuum Oil Company, Far East operating unit of the Socony-Vacuum Oil Company, Inc., and the Standard Oil Company of New Jersey, has spent all but the last three years of his service in the oil industry in foreign countries. He joined the foreign service of the Standard Oil Company of New York in 1912, following graduation from Coalgate University and continued in it until he was returned to this country in 1931 to take an executive position in the home office.



P. W. PARKER

Mr. Parker has an intimate knowledge of the many problems of those who introduced the sale of petroleum products into the Far East, especially in South China, where he was located for several years. He served in various capacities during the time he was in the Far East, pioneering with others of his company in the construction and operation of widely scattered marketing facilities meeting the special needs of the Orient.

Following his return to the United States, Mr. Parker in May of last year was elected a vice president of the Standard Oil Company of New York, Inc. Last fall the Standard of New Jersey and Socony-Vacuum companies merged their Far East operations under the name of the Standard Vacuum Oil Company and Mr. Parker was elected a vice president of the new company at that time with headquarters at 26 Broadway, New York City. The company, whose operations cover all branches of the industry, is now one of the largest operating companies outside the United States.

W. M. CUTSHALL, of Tulsa, was promoted, July 1, to chief warehouse man of Texas Company.

* * *

A. LLOYD EASTLAKE, of the Sinclair Refining Company, Chicago, is at present on a visit to London, England.

* * *

FOREST WIMBISH, geologist for the Magnolia Petroleum Company in the Kansas office at Wichita, is taking his vacation.

* * *

A. FRANK DABELL, general manager in Trinidad of the Trinidad Petroleum Development Company, has arrived in London, England, on vacation.

* * *

A. W. SHATTUCK, Texas Company scout in the Seminole, Okla., area, is taking a two weeks' vacation to California, where he will join his wife.

* * *

B. R. JACKSON, representative of the Anglo-Persian Oil Company in the United States, leaves for New York at the end of this month after his visit to England.

* * *

W. A. PHELPS has been made scout for the Sinclair Prairie Oil Company and will make his headquarters at Eastland where he formerly worked in the offices of the company.

* * *

VISCOUNT BEARSTED, M.C., and J. B. AUG. KESSLER have withdrawn from the board of the Shell Union Oil Corporation in order to permit of flexibility and workability of the board.

* * *

R. W. McDOWELL, of Tulsa, vice president in charge of sales of the Mid-Continent Petroleum Corporation, has returned from an extended business trip and vacation through the East, including New York and Chicago.

* * *

THOMAS M. GALEY, oil and gas operator of Owensboro, Ky., returned there last Thursday following a week spent in Independence, Kans., his former home, visiting friends and looking after business interests.

MAJ. FREDERICK T. McKEAN, of the Imperial Oil, Ltd., Toronto, Canada, accompanied by MRS. McKEAN, left New York, Sunday, July 15, on the Champlain of the French line on a European trip.

* * *

MR. and MRS. GEORGE PARSONS, who have been spending three months at Petrolia, Ontario, and other Canadian points, left on July 7 via New York for Talara, Peru, where Mr. Parsons is on the International Petroleum Company staff.

* * *

R. G. REID, well known to Alberta oil and gas operators as minister of lands and mines in the provincial government, has been named premier of Alberta, succeeding J. E. BROWNLEE, who resigned. Mr. Reid's department had supervision and control of oil and gas operations in the province.

* * *

OSCAR E. BERG, formerly with the A. O. Smith Corporation of Milwaukee, Wis., and more recently district representative for Struthers-Wells Corporation, has become associated with the Allegheny Steel Company, as district manager, with headquarters in Houston, Tex. He will cover Texas, Arkansas, Louisiana, and Oklahoma.

* * *

E. A. LYON, who with two assistants, opened the New York office of the Gulf Refining Company in New York City 32 years ago, retired from active service with the company last week. Under his supervision the Gulf's domestic and export marketing facilities expanded rapidly. He has been succeeded as district manager by WALDO EMERSON, who was formerly connected with the Tide Water Oil Company and the Vacuum Oil Company.

* * *

WARD VICKREY, scout for the Vernon Oil & Gas Company with headquarters at Wichita, Kans., is taking his annual leave.

* * *

D. C. WIXSON, manager of station operations for the Mid-Continent Petroleum Corporation of Tulsa, has left for a business and vacation trip through the northern states.

* * *

GEORGES VORBE, instructor in geology in the University of California, is a new geologist with Stanolind Oil & Gas Company in the Midland, Tex., office. He was formerly in Midland with the Texas Pacific Coal & Oil Company.

* * *

MR. and MRS. J. C. MAXWELL, of Fort Worth, Tex., are making and extended tour through the Orient and then will go to Europe on a several months vacation. Mr. Maxwell is an independent operator and a director of the Texas Pacific Coal & Oil Company.

* * *

GLENN HARROUN, superintendent of the Sinclair Prairie Oil Company, Fort Worth, Tex.; JACK JORDAN, superintendent of the East Texas district, and BOB MILTON, in charge of the East Texas machine shop at Troup, have made a business trip to Milwaukee by plane.

* * *

R. C. (RAY) INGRAM, for the past 13 years an employe of the Union Oil Company and who until December 1, 1933, was southern division fuel oil supervisor, has been appointed central division export and marine sales supervisor with headquarters at San Francisco.

* * *

H. B. SIMCOX, well known engineer for the Continental Oil Company, who has been manager of the production and drilling for the company in California, with headquarters at Los Angeles, has been transferred to Fort Worth, Tex., where he will be in charge of the company's North Texas and New Mexico division office, succeeding GEORGE M. McINTYRE, who resigned to enter business for himself.

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended July 14 Sales	Week ended July 14 High	Week ended July 14 Low	Week ended July 14 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
55⅝	41½	1,100	50¾	49¾	50¾	Amerada Corp.	774,875	N.P.	50cQ	7-31-34	47⅝	18½	22¾	12	23	11¼
35¼	21¾	7,600	26⅛	25⅜	25¾	Atlantic Refining	2,665,234	$25	25cQ	6-15-34	32½	12⅜	21⅞	8⅝	23⅝	8⅝
10	7	2,000	7½	7⅛	7¼	Barnsdall Corp.	2,248,795	$5	....	5-11-31	11	3	7	3⅜	14½	4
19¼	10¾	91,100	14¼	10¾	10⅞	Columbia Gas & Elec.	11,610,036	N.P.	12½cQ†	5-15-34	28⅛	9	21	4¼	45⅝	11⅝
14¼	9½	21,200	10⅜	9⅞	10	Consolidated Oil Corp.	14,218,835	N.P.	28c	4- 7-34	15¾	5	9	4	15⅞	4⅛
22¾	16½	10,700	20⅜	19½	20	Continental Oil of Delaware	4,738,593	$5	25c	4-30-34	19⅝	4⅞	9⅜	3⅝	12	5
22¼	15⅛	1,000	19	18¼	18¼	General Asphalt	387,149	$10	....	6-15-32	27	4⅝	15½	4¾	47	9⅜
5⅜	3¼	500	3⅞	3⅝	3⅝	Houston Oil (new)	1,098,618	$25	....	10-17-30	7⅜	1⅞	5⅜	1⅛	14⅛	3
3⅜	1¾	300	1¾	1¾	1¾	Louisiana Oil Refining	1,302,158	N.P.	....	.....	4	⅝	2¼	½	4½	1
14¾	11	3,000	13⅛	12⅝	12⅞	Mid-Continent Petroleum	1,857,912	N.P.	25c	5-15-34	16	3¾	8⅞	3¾	16⅝	5
20¾	11½	100	15⅜	15⅜	15⅜	National Supply of Delaware	382,591	$25	....	5-15-31	28⅝	4	13	3½	10¼	5
15⅞	10½	5,200	11½	11	11	Ohio Oil Co.	6,563,107	N.P.	15c	6-15-34	17⅝	4¾	11	5	19½	5⅛
8⅝	6½	400	7	7	7	Pacific Western Oil	1,000,000	N.P.	25c‡	10-25-33	9½	3	8	3	15	2⅞
2½	1¼	100	1¼	1¼	1¼	Panhandle P. & R.	198,770	N.P.	....	.....	4¼	⅜	1¼	¼	4¼	⅝
20¾	15⅛	7,500	18	16¾	17⅜	Phillips Petroleum	4,154,687	N.P.	25c	5-14-34	18¾	4¾	8½	2	16⅝	4
16¾	10	1,400	12⅛	11⅝	11⅝	Plymouth Oil Co.	990,261	$5	25cQ	6-30-34	17⅝	6¾	12½	6	18	6
14⅞	9⅜	7,700	10½	9⅞	9⅞	Pure Oil	3,038,370	N.P.	....	9- 1-30	15⅜	2½	6½	2⅞	11⅞	3¼
39⅛	33	800	35¾	35⅜	35⅝	Royal Dutch N. Y. shares	432,224	$14	$1.07½	8-14-33	39¾	17⅝	23¾	12¼	42⅝	13
28⅜	25⅜	2,200	32½	31⅜	32½	Seaboard Oil of Delaware	1,204,460	N.P.	15cQ§	6-15-34	43⅜	15	20⅜	6⅝	20¾	5½
11⅞	7⅝	3,900	8⅜	8	8⅛	Shell Union Oil	13,070,625	N.P.	....	6-30-30	11⅝	4	8¾	2½	10¼	2½
89	58	100	73	73	73	Shell Union Oil pfd.	400,000	$100	....	7- 1-31	61	28½	65¼	18	78	15
11¼	8¼	800	10½	10	10½	Simms Petroleum	461,000	$10	30c	8- 1-34	12⅜	4⅞	7½	3¼	11	3½
11½	7⅞	400	9⅜	9¼	9¼	Skelly Oil	1,008,514	$25	....	12-15-30	9⅞	3	5¾	2½	12⅞	2
19⅞	14	20,300	16⅛	15⅝	16	Socony-Vacuum	30,905,006	$25	15cQ	6-15-34	17	6	12¼	5¼	21	8⅜
42⅞	30⅝	9,500	35¼	34⅛	34¾	Standard Oil of California	13,102,900	N.P.	25c	6-15-34	45	19½	31⅞	15⅛	51⅜	23¼
41	33⅞	No sales ..	..	..	..	Standard Oil of Kansas	200,000	$10	50cQ	7-31-34	39⅞	12¾	16½	7	19	7¾
50⅛	41⅛	14,200	45¼	44¼	45⅛	Standard Oil of New Jersey	25,740,965	$25	50cSA	6-15-34	47½	22¾	37⅜	19⅞	52½	26
63⅞	51½	700	62½	62⅛	62½	Sun Oil	1,733,013	N.P.	25cQ	6-15-34	59	35	39⅞	24⅜	45¼	26¾
29⅜	21½	6,900	24½	23⅞	24⅛	Texas Corp.	9,352,371	$25	25cQ	7- 1-34	30⅛	10⅜	18¼	9¼	36¼	9⅞
6½	3⅛	1,300	4	3⅞	3⅞	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	6½	1⅜	4	1½	6½	1⅞
14¼	8½	9,100	12¼	11½	11½	Tide Water Associated	5,618,672	N.P.	....	2-16-31	11⅜	3⅛	5⅝	2	9	2¼
84¾	64½	400	83	82⅝	83	Tide Water Associated pfd.	666,524	$100	$1.50Q	4- 1-34	65¼	23½	60	20	68	20½
20½	15	4,500	16¾	16	16¾	Union Oil of California	4,386,070	$25	25cQ	5-10-34	23⅜	8½	15⅜	8	26⅝	11
21¼	15¾	1,200	20¼	19	20¼	Union Tank Car	1,200,000	N.P.	30cQ	6- 1-34	22¾	10½	19¼	11¾	25¼	16
5¾	3½	1,100	3⅝	3½	3⅝	Wilcox Oil & Gas	424,839	$5	....	5-10-28	5½	2	8¾	2¾	9⅝	2¾

*Ex-dividend. †Payable in 5 per cent convertible preferred stock. ‡Initial dividend. §Plus extras.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1934 High	1934 Low	Week ended July 14 Sales	Week ended July 14 High	Week ended July 14 Low	Week ended July 14 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	1933 High	1933 Low	1932 High	1932 Low	1931 High	1931 Low
38	31¾	No sales ..	..	..	..	Buckeye Pipe Line Co.	200,000	$50	75cQ	6-15-34	39¾	25	35	17½	56	30
5½	2⅝	1,000	3½	3¼	3¼	Carib Syndicate	579,000	25c	....	.....	7¾	¼	¾	¼	2⅝	⅛
126½	115	50	123	123	123	Chesebrough Mfg. Co.	120,000	$25	$1Q†	6-29-34	129	71	90	53	129½	75
4¼	1⅜	6,600	2⅛	2	2⅛	Cities Service	37,804,394	N.P.	....	6- 1-32	6¼	1½	6⅞	1¼	20¾	5
3¼	1¼	500	1⅝	1⅝	1⅝	Colon Oil	2,200,000	N.P.	....	.....	4	¾	1¼	¼	3⅛	⅛
3⅞	1⅝	700	2⅛	2⅛	2⅛	Cosden Oil	399,687	$1	....	.....	3⅞	1⅜	2⅞	¼	3¾	⅜
13⅜	9⅝	2,100	12⅜	12	12	Creole Petroleum	6,974,356	$5	....	.....	12	4¾	3½	1⅜	3⅞	1⅝
7½	4¾	No sales ..	..	..	..	Darby Petroleum	509,696	$5	25c	2-15-34	8	2⅛	7⅛	1⅝	2½	1⅝
2¼	1⅝	No sales ..	..	..	..	Derby Oil & Refining	263,162	N.P.	....	.....	2¾	⅞	3	1	6	1½
36	31	No sales ..	..	..	..	Eureka Pipe Line	50,000	$100	$1Q	8- 1-34	41¾	20	35	18	36	19
76¾	56½	2,700	65¼	63½	64½	Gulf Oil Corp.	4,538,101	$25	....	10- 1-31	62	24	44⅜	23	75½	25⅝
46⅜	33½	5,200	43½	41½	43¼	Humble Oil & Refining (new)	8,023,935	N.P.	25cQ	7- 1-34	105½	40	55	35⅝	72	44½
15½	12⅝	9,500	15	14¾	14⅞	Imperial Oil of Canada	26,857,152	N.P.	25cSA†‡	6- 1-34	15⅞	6½	10⅞	6¼	18¼	7⅝
6⅞	3⅞	No sales ..	..	..	..	Indiana Pipe Line	300,000	$10	15cSA	5-15-34	8	3⅛	7½	2¾	21⅛	5½
30⅝	19⅜	9,800	27¾	26⅝	27	International Petroleum	14,247,088	N.P.	56cSA†‡	6- 1-34	23½	8⅞	12¼	8	15½	7⅜
3¾	2⅛	8,100	4	3⅞	4	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	2¼	⅞	2½	½	2	½
5⅞	3½	100	3½	3½	3½	Lion Oil Refining	270,000	N.P.	....	10-27-30	9½	1¼	3½	⅞	6¾	1½
8¾	4¾	2,200	5½	5	5	Lone Star Gas	5,382,723	N.P.	16cQ§	3-31-34	11⅞	4¾	11	3⅜	29	5½
5½	4	1,100	5¼	5	5¼	Mountain Producers	1,593,584	$10	15cQ	4- 2-34	6½	2½	4¾	2⅛	5⅞	2
18⅛	14	1,500	16⅛	15	15⅝	National Fuel Gas	3,810,183	N.P.	25cQ	4-16-34	20	10	14⅝	8	26½	9¾
9½	7⅝	100	8⅜	8⅜	8⅜	National Transit	509,000	$12.50	40cSA	6-15-34	10	5½	10½	6	17½	5
2¼	1¾	1,000	2¼	2¼	2¼	New Bradford Oil	1,445,202	$5	10c	3-15-34	2⅛	½	⅞	¼	1½	½
2¾	1	100	1¼	1¼	1¼	New Mexico and Arizona	1,000,000	$1	....	.....	1⅞	½	1¼	⅜	3	¾
4¾	3	No sales ..	..	..	..	New York Transit	100,000	$5	15cSA	4-14-34	4⅞	3	9¾	7½	14½	5⅝
7	4⅝	100	6¼	6¼	6¼	Northern Pipe Line	120,000	$10	25cSA	1- 2-34	6⅛	4¼	5½	3⅛	35½	20
2⅝	⅞	5,800	1⅞	1⅝	1⅝	Pantepec Oil	1,608,700	N.P.	....	.....	3¾	⅛	⅝	1/16	2	⅜
3⅛	1	700	1¾	1⅛	1⅛	Ryan Consolidated	296,931	N.P.	....	.....	4¼	⅝	2⅛	⅝	3	⅝
7⅞	5¾	1,900	6⅞	6¼	6¼	Salt Creek Producers	1,496,859	$10	20cQ	8- 1-34	9¼	3½	5½	2⅞	7⅝	2⅝
26½	17½	600	24¾	23¾	24½	South Penn Oil	1,200,000	$25	30cQ	6-30-34	22⅛	11	16½	9⅝	23⅞	9¼
5¼	4	No sales ..	..	..	..	Southern Pipe Line	100,000	$10	10cSA	3- 1-34	6	2⅛	10	3¾	17	7
47	41	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	7- 2-34	43	24½	37	27	42½	25
32¾	25	6,700	27⅜	27	27	Standard Oil of Indiana	15,528,504	$25	25cQ	3-15-34	34	17	25⅛	13⅛	38½	13½
17⅝	14⅝	2,100	16⅝	16¼	16¼	Standard Oil of Kentucky	2,606,983	$10	25cQ	6-15-34	19¼	8⅜	15⅞	8⅞	23⅝	12⅛
16⅜	12⅞	No sales ..	..	..	..	Standard Oil of Nebraska	190,822	$25	25cQ	6-20-34	20½	11	19	10¼	36½	16
27½	18¼	350	19¾	19¼	19¾	Standard Oil of Ohio	753,740	$25	....	1- 3-33	41	15½	30⅛	15½	62½	23
2	⅛	2,900	1⅜	1¼	1⅜	Sunray Oil	1,162,840	$5	....	4-15-31	1½	¼	⅝	⅛	5¼	¼
11	4⅝	600	5⅞	5¾	5⅞	Texon Oil & Land	936,028	N.P.	15cQ	6-30-34	13¾	6¼	10½	4½	12⅞	2½

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Bureau of Mines Statistics for the Month of May, 1934

SUPPLY AND DEMAND OF ALL OILS
(Thousands of barrels of 42 gallons)

	May, 1934	April, 1934	May, 1933	Jan.-May, 1934	Jan.-May, 1933
NEW SUPPLY:					
Domestic production:					
Crude petroleum	79,870	75,796	84,747	368,640	350,389
Daily average	2,576	2,526	2,734	2,441	2,320
Natural gasoline	2,907	2,926	2,776	14,671	13,640
Benzol*	172	152	105	745	465
Total production	82,949	78,874	87,628	384,056	364,494
Daily average	2,676	2,629	2,827	2,543	2,414
Imports:					
Crude petroleum	†3,012	†2,845	2,206	14,098	14,119
Refined products	1,444	1,258	653	5,774	6,303
Total new supply, all oils	87,405	82,977	90,487	403,928	384,916
Daily average	2,820	2,766	2,919	2,675	2,549
Decrease in stocks, all oils	2,082	224	‡9,555	14,500	‡10,093
DEMAND:					
Total demand	89,487	83,201	80,932	418,428	374,823
Daily average	2,887	2,773	2,611	2,771	2,482
Exports:					
Crude petroleum	3,724	3,942	2,678	15,047	11,577
Refined products	5,915	7,675	5,499	31,065	28,445
Domestic demand:					
Motor fuel	38,141	32,735	33,999	155,868	142,224
Kerosene	3,222	3,654	3,005	19,493	15,835
Gas oil and fuel oil	26,744	25,476	23,527	147,043	131,789
Lubricants	1,941	1,651	1,624	7,977	6,117
Wax	78	82	82	410	428
Coke	524	520	528	3,641	3,735
Asphalt	1,285	1,021	1,231	3,579	3,428
Road oil	779	247	446	1,659	819
Still gas (production)	3,674	3,642	4,232	17,252	17,275
Miscellaneous	172	183	155	736	570
Losses and crude used as fuel	3,288	2,373	3,926	14,658	12,561
Total domestic demand	79,848	71,584	72,765	372,316	334,801
Daily average	2,576	2,386	2,347	2,466	2,217
STOCKS:					
Crude petroleum	355,883	354,350	343,588	355,883	343,588
Natural gasoline	4,420	4,269	3,966	4,420	3,966
Refined products	227,410	231,176	250,648	227,410	250,648
Total, all oils	587,713	589,795	598,202	587,713	598,202
Days' supply	204	213	229	212	241

*From coal division. †Receipts of foreign crude as reported to Bureau of Mines. ‡Increase.

COMPARATIVE ANALYSES
(Thousands of barrels of 42 gallons)

	May, 1934 Total	May, 1934 Dly. av.	April, 1934 Total	April, 1934 Dly. av.	Jan.-May, 1934	Jan.-May, 1933
CRUDE PETROLEUM:						
Runs to stills	76,258	2,460	73,563	2,452	359,610	338,281
MOTOR FUEL:						
Production	36,068	1,163	34,875	1,162	169,336	159,680
Imports	.....	.....	.....	.....	1	5
Exports*	1,907	62	2,723	91	11,135	12,233
Stocks:						
Gasoline	57,208	.....	61,339	.....	57,208	55,067
Natural gasoline	4,420	.....	4,269	.....	4,420	3,966
Domestic demand	38,141	1,230	32,735	1,091	155,868	142,224
KEROSENE:						
Production	4,548	147	4,647	155	22,239	20,123
Imports	.....	.....	.....	.....	.....	.....
Exports	678	22	1,157	39	3,833	3,501
Stocks	5,470	.....	4,822	.....	5,470	5,761
Domestic demand	3,222	104	3,654	122	19,493	15,835
GAS OIL AND FUEL OIL:						
Production	27,705	894	26,242	875	132,860	126,466
Transfers†	353	11	665	22	3,524	4,398
Imports:						
Bonded warehouses	1,074	35	941	31	4,505	1,635
For domestic use	351	11	286	10	1,137	2,763
Exports	2,501	81	2,903	97	11,708	8,274
Stocks	106,279	.....	106,041	.....	106,279	125,975
Domestic demand	26,744	863	25,476	849	147,043	131,789
Railroad (Class 1)‡	(§)	(§)	3,560	118	¶14,243	¶12,808
Pub. util. pow. plants	800	26	766	26	4,177	3,311
Other	(§)	(§)	18,778	626	116,042	102,078
Bunker oil	2,570	83	2,372	79	12,581	13,592
LUBRICANTS:						
Production	2,577	83	2,322	77	11,114	9,227
Imports	.....	.....	.....	.....	.....	.....
Exports	659	21	712	24	3,394	3,318
Stocks	6,773	.....	6,796	.....	6,773	8,167
Domestic demand	1,941	63	1,651	55	7,977	6,117
WAX (thousands of pounds):						
Production	41,720	1,346	39,480	1,316	210,000	179,480
Imports:						
Bonded warehouses	1,326	43	724	24	2,830	504
For domestic use	2,655	86	3,139	105	20,681	9,038
Exports	14,049	453	15,138	505	85,628	107,401
Stocks	101,551	.....	91,763	.....	101,551	124,770
Domestic demand	21,864	705	23,086	770	115,165	120,479
COKE (short tons):						
Production	74,400	2,400	101,000	3,367	548,800	631,800
Stocks	514,500	.....	552,900	.....	514,500	1,176,200
ASPHALT (short tons):						
Production	250,400	8,077	204,900	6,830	861,700	701,600
Imports (natural)	900	29	3,000	100	7,800	9,800
Stocks	382,300	.....	378,300	.....	382,300	297,600

*Includes benzol—6,461 bbls. in May, 1934. †Net transfers in California. ‡Interstate Commerce Commission. §Not available. ¶January-April. ‖U. S. Geological Survey.

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM
(Thousands of barrels of 42 gallons)

Domestic petroleum by fields of origin:	May, 1934 Total	May, 1934 Dly. av.	April, 1934 Total	April, 1934 Dly. av.	Jan.-May, 1934	Jan.-May, 1933
Appalachian:						
Pennsylvania Grade	2,142	69	2,089	70	10,123	8,558
Other (inc. Kentucky)	555	18	525	17	2,483	2,716
Lima-N. E. Ind.-Mich.	1,087	35	1,023	34	4,882	2,994
Ill.-S. W. Ind.	377	12	495	16	2,147	1,581
Mid-Continent:						
N. La. and Ark.	1,877	61	1,757	59	9,330	9,410
W. Tex.-S. E. N. Mex.	6,034	195	*6,212	207	30,224	31,712
East Texas	17,320	559	16,098	537	76,589	181,484
Other (Okla., Kans., N. Tex., etc.)	26,250	847	*24,568	819	122,664	
Gulf Coast	6,057	195	*6,695	224	31,618	29,376
Rocky Mountain	1,131	36	1,384	46	5,805	5,553
California	14,846	479	13,952	466	68,466	66,386
Total demand	77,670	2,506	74,838	2,495	364,331	339,770
Exports	3,724	120	3,942	132	15,047	11,577
Domestic demand	73,946	2,386	70,896	2,363	349,284	328,193
Foreign petroleum	3,256	105	2,856	95	13,872	15,573
Total domestic demand	77,202	2,491	73,752	2,458	363,156	343,766

*Revised.

PRODUCTION OF CRUDE PETROLEUM BY STATES AND PRINCIPAL FIELDS
(Thousands of barrels of 42 gallons)

	May, 1934 Total	May, 1934 Dly. av.	April, 1934 Total	April, 1934 Dly. av.	Jan.-May, 1934	Jan.-May, 1933
Arkansas	936	30	922	31	4,585	4,644
California:						
Huntington Beach	1,292	42	1,190	40	6,010	3,891
Kettleman Hills	1,834	59	1,682	56	8,209	8,969
Long Beach	2,114	68	2,008	67	9,464	10,495
Santa Fe Springs	1,294	42	1,288	43	6,331	7,962
Rest of State	8,537	275	8,305	276	41,007	38,746
Total California	15,071	486	14,473	482	71,011	70,063
Colorado	98	3	86	3	435	404
Illinois	411	14	373	12	1,908	1,471
Indiana	75	2	66	2	335	249
Kansas	4,173	135	4,031	134	18,892	16,207
Kentucky	350	11	338	11	1,758	1,867
Louisiana:						
Gulf Coast	1,853	60	1,475	49	7,246	5,559
Rest of State	764	25	764	25	3,944	4,166
Total Louisiana	2,617	85	2,239	74	11,190	9,724
Michigan	1,002	32	901	30	4,408	2,260
Montana	276	9	237	8	1,156	797
New Mexico	1,426	46	1,401	47	6,673	5,392
New York	319	10	295	10	1,479	1,233
Ohio:						
Central and eastern	299	10	360	9	1,333	1,323
Northwestern	95	3	85	3	410	400
Total Ohio	394	13	345	12	1,743	1,723
Oklahoma:						
Oklahoma City	6,175	199	5,802	193	27,569	20,913
Seminole	3,331	107	3,188	106	15,998	16,030
Rest of State	6,968	225	6,706	224	32,768	29,297
Total Oklahoma	16,474	531	15,697	523	76,335	66,240
Pennsylvania	1,301	42	1,187	40	5,814	4,924
Tennessee	1	.....	1	.....	4	1
Texas:						
Gulf Coast	5,166	167	4,809	160	24,285	22,297
West Texas	4,384	141	4,075	136	20,144	24,423
East Texas	16,280	525	15,867	529	74,817	76,510
Panhandle	1,770	57	1,660	55	7,898	6,824
Rest of State	5,843	189	5,514	184	27,206	27,028
Total Texas	33,443	1,079	31,925	1,064	154,350	157,081
West Virginia	351	11	332	11	1,678	1,443
Wyoming:						
Salt Creek	556	18	536	18	2,691	3,025
Rest of State	596	19	411	14	2,195	1,641
Total Wyoming	1,152	37	947	32	4,886	4,666
Total United States	79,870	2,576	75,796	2,526	368,640	350,389

STOCKS OF CRUDE PETROLEUM
(Thousands of barrels of 42 gallons)

EAST OF CALIFORNIA:	May 31, 1934	April 30, 1934	May 31, 1933
At refineries by location:			
East Coast: Domestic	10,943	9,783	9,136
Foreign	2,578	2,694	4,240
Appalachian	1,714	1,741	2,400
Indiana, Illinois, Kentucky, Michigan	4,487	4,342	3,881
Oklahoma, Kansas and Missouri	6,286	6,288	4,430
Texas: Inland	1,947	2,090	2,747
Gulf Coast: Domestic	11,018	10,651	6,288
Foreign	120	177	72
Louisiana Gulf Coast: Domestic	3,591	3,640	3,672
Foreign	583	654	838
Arkansas and Inland Louisiana	715	730	524
Rocky Mountain	13,087	12,692	12,611
California	9,292	9,233	11,205
Total	66,361	64,715	62,044
At refineries by origin:			
Pennsylvania Grade	1,481	1,458	2,227
Other Appalachian (including Kentucky)	601	569	581
Lima-Northeast Indiana-Michigan	475	444	211
Illinois-Southwest Indiana	152	172	148
North Louisiana and Arkansas	2,286	2,622	2,480
West Texas and Southeast New Mexico	3,898	3,525	4,447
East Texas	9,291	9,241	18,031
Oklahoma, Kansas, North Texas, etc.	16,846	15,870	
Gulf Coast	5,704	5,395	4,975
Rocky Mountain	13,054	12,661	12,589
California	9,292	9,233	11,205
Foreign	3,281	3,525	5,150
Total	66,361	64,715	62,044
Pipe line and tank farm:			
Pennsylvania Grade	3,621	3,659	4,411
Other Appalachian (including Kentucky)	787	870	789
Lima-Northeast Indiana-Michigan	1,231	1,252	738
Illinois-Southwest Indiana	11,140	11,001	11,306
North Louisiana and Arkansas	8,815	8,636	10,844
West Texas and Southeast New Mexico	25,500	*26,112	29,183
East Texas	34,998	36,098	
Oklahoma, Kansas, North Texas, etc.	145,220	*144,136	163,426
Gulf Coast	10,159	*9,531	10,027
Rocky Mountain	15,300	15,228	15,603
California	24,429	24,656	27,517
Total	281,200	281,179	273,844
Lease (producers') stocks	8,322	8,456	†7,700
Total refinable crude in the United States	355,883	354,350	343,588

*Revised. †East of California only.

RECEIPTS OF FOREIGN CRUDE PETROLEUM
(Thousands of barrels of 42 gallons)

Atlantic Seaboard:	May, 1934	April, 1934
Venezuela	2,033	2,082
Colombia	497	551
Mexico	466	129
Gulf Coast:		
Mexico	16	211
Venezuela	....	72
Total	3,012	2,845

SHIPMENTS FROM CALIFORNIA TO EASTERN PORTS IN THE UNITED STATES*
(Thousands of barrels of 42 gallons)

	May, 1934	Apr., 1934	May, 1933	Jan.-May, 1934	Jan.-May, 1933
Gasoline	798	636	1,137	2,856	3,907
Natural gasoline	....	....	....	....	51
Kerosene	11	204	82	762	796
Gas oil and Diesel oil	81	204	71	1,310	1,284
Fuel oil	1,545	1,449	140	6,901	727
Lubricants	1	12	1	24	17
Asphalt	70	....	....	72	....
Miscellaneous	12	1	14	31	120
Total	2,518	2,506	1,445	11,956	6,928

*Compiled by E. T. Knudsen of the San Francisco office of the Bureau of Mines.

RECORD OF WELLS FOR IMPORTANT FLUSH FIELDS, MAY, 1934*

	Completions			Total initial production	Average initial production	Drilling May 31
	Oil	Gas	Dry	(bbls.)	(bbls.)	
Texas	646	27	226	835,600	1,300	1,095
East Texas	310	..	4	589,000	1,900	307
Gulf Coast	88	3	49	65,800	700	152
Conroe	21	..	1	32,500	1,500	9
Greta	11	1	2	3,300	300	14
West Texas	30	1	6	122,800	4,100	110
California	43	..	10	83,000	1,900	188
Kettleman Hills	7	..	..	56,300	8,000	25
Long Beach	11	..	1	2,100	190	18
Huntington Beach	2	..	1	1,300	650	3
Oklahoma	101	11	37	71,100	700	409
Oklahoma County	6	..	..	8,400	1,400	33
Pottawatomie and Seminole Counties.	14	0	1	8,600	600	63
New Mexico	9	1	..	14,100	1,600	59
Lea County (Hobbs)						
Other states	313	59	96	67,200	200	1,186
Total United States	1,112	98	369	1,071,000	960	2,937

*From The Oil and Gas Journal and California office of the American Petroleum Institute.

PRODUCTION OF CRUDE PETROLEUM BY DISTRICTS

(Thousands of barrels of 42 gallons)

	May, 1934		April, 1934		Jan.-May, 1934	Jan.-May, 1933
	Total	Dly. av.	Total	Dly. av.		
Appalachian:						
Pennsylvania Grade	2,117	68	1,938	65	9,623	8,231
Other (inc. Kentucky)	504	16	476	16	2,443	2,560
Lima-N. B. Ind.-Mich.	1,097	35	986	33	4,818	2,665
Ill.-S. W. Ind.	486	16	429	14	2,243	1,715
Mid-Continent:						
N. La. and Ark.	1,700	55	1,686	56	8,529	8,809
West Texas-S. E. N. Mex.	5,770	186	5,445	182	26,642	29,680
East Texas	16,280	525	15,867	529	74,817	76,510
Other (Okla., Kans., N. Tex., etc.)	28,260	912	26,902	896	130,231	116,299
Gulf Coast	7,019	227	6,284	209	31,531	27,856
Rocky Mountain	1,566	50	1,301	44	6,662	6,001
California	15,071	486	14,473	482	71,011	70,063
Total	79,870	2,576	75,796	2,526	368,640	350,389

STOCKS OF CRUDE PETROLEUM BY STATES AND BY LOCATION

(Thousands of barrels of 42 gallons)

	May 31, 1934				April 30, 1934			
	Ref.	Pipe line	Lease	Total	Ref.	Pipe line	Lease	Total
Arkansas	514	4,275	350	5,139	555	4,291	370	5,216
California	9,292	24,429	1,746	35,467	9,233	24,656	1,770	35,659
Colorado	304	72	20	396	273	63	20	356
Georgia*	613	.....	.....	613	548	.....	.....	548
Illinois	1,463	10,709	100	12,272	1,293	10,658	110	12,060
Indiana	1,400	1,685	8	3,093	1,404	1,842	8	3,254
Kansas	1,936	12,477	400	14,813	1,935	12,912	390	15,237
Kentucky†	491	511	76	1,078	420	549	76	1,045
Louisiana‡	4,375	7,648	225	12,248	4,469	7,135	220	11,824
Maryland	1,387	.....	.....	1,387	1,311	.....	.....	1,211
Massachusetts§	1,338	.....	.....	1,338	1,220	.....	.....	1,220
Michigan	303	713	70	1,086	279	754	70	1,103
Missouri¶	182	3,448	.....	3,630	183	3,485	.....	3,668
Montana	171	487	70	728	207	433	70	710
New Jersey	5,492	326	.....	5,818	5,116	316	.....	5,432
New Mexico	7	271	175	453	6	262	190	458
New York	1,633	114	17	1,764	1,585	136	17	1,738
Ohio	1,070	7,628	100	8,798	1,213	7,445	100	8,758
Oklahoma	4,168	84,122	1,630	89,921	4,170	82,527	1,690	88,387
Pennsylvania	4,460	1,873	90	6,423	4,304	1841	95	6,140
Texas	12,085	103,681	2,770	119,536	12,918	105,028	2,750	120,696
Utah	322	.....	.....	322	336	.....	.....	336
West Virginia	72	2,018	125	2,215	68	2,143	130	2,341
Wyoming‖	12,283	14,712	350	27,345	11,870	14,703	380	26,953
Total United States	66,361	281,200	8,322	355,883	64,715	281,179	8,456	354,350

*Includes South Carolina and Virginia. †Includes Tennessee. ‡Includes Alabama. §Includes Rhode Island. ¶Includes Iowa. ‖Includes Nebraska and South Dakota.

STOCKS HELD BY REFINING COMPANIES, MAY 31, 1934

(Thousands of barrels of 42 gallons)

	Gasoline				Gas oil and distillate fuels	Residual fuel oils
	At refineries	Bulk and pipe lines	Total	Kerosene		
East Coast	6,220	11,278	17,498	1,194	2,368	5,188
Appalachian	1,267	1,016	2,283	217	138	231
Ind., Ill., Ky., etc.	6,095	2,953	9,048	450	1,439	1,720
Okla., Kans., Mo.	4,266	1,732	5,998	471	899	1,940
Texas Inland	1,721	76	1,797	124	185	1,982
Texas Gulf	3,994	856	4,850	1,253	2,821	3,233
Louisiana Gulf	642	657	1,299	305	1,149	949
Ark. and La. Inland	331	40	371	31	191	894
Rocky Mountain	1,195	.....	1,195	138	172	364
California	10,776	2,093	12,869	1,287	3,762	76,604
Total	36,507	20,701	57,208	5,470	13,174	93,105

	Wax (thou. of pounds)				
	Lubricants	Crude scale	Refined	Total	Coke (tons)
East Coast	2,092	19,937	22,953	42,890	13,400
Appalachian	842	15,052	1,222	16,274	5,200
Ind., Ill., Ky., etc.	511	12,540	1,492	14,033	69,000
Okla., Kans., Mo.	502	2,867	1,108	3,975	56,500
Texas Inland	98	.....	103	103	60,700
Texas Gulf	1,854	3,207	13,040	16,247	124,800
Louisiana Gulf	104	207	1,065	1,272	500
Ark. and La. Inland	18	.....	.....	.....	100
Rocky Mountain	104	5,940	817	6,757	85,300
California	848	.....	.....	.....	99,000
Total	6,773	59,750	41,801	101,551	514,500

			Unfinished oils		
	Asphalt (tons)	Road oil	Miscellaneous	Crude gasoline	Other	Natural gasoline
East Coast	124,900	98	28	847	7,903	203
Appalachian	17,300	33	35	303	1,783	4
Ind., Ill., Ky., etc.	78,000	149	12	1,181	5,799	48
Okla., Kans., Mo.	7,100	221	36	824	4,820	39
Texas Inland	.....	45	10	370	1,060	18
Texas Gulf	13,500	24	28	2,412	9,581	165
Louisiana Gulf	25,400	27	.....	236	1,224	21
Ark. and La. Inland	44,800	54	2	31	278	7
Rocky Mountain	4,200	297	7	197	1,707	14
California	67,100	189	52	929	3,810	2,375
Total	382,300	1,137	210	7,330	37,965	2,894

Grand total stocks refined products, 227,410,000 bbls.

NUMBER OF WELLS COMPLETED IN THE UNITED STATES*

	May, 1934	Apr., 1934	May, 1933	Jan.-May, 1934	Jan.-May, 1933
Oil	1,112	914	460	4,676	2,606
Gas	98	72	61	452	324
Dry	369	287	273	1,553	1,427
Total	1,579	1,273	794	6,681	4,357

*From The Oil and Gas Journal and California office of the American Petroleum Institute.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, MAY, 1934

(Thousands of barrels of 42 gallons)

	Straightrun			Cracked			Nat. gaso.		Gasoline	
		Per cent			Per cent			Per cent		Per cent
	Total	(*)	(†)	Total	(*)	(†)	Total	(†)	Total	(*)
East Coast	2,958	20.1	52.8	2,610	17.7	46.5	40	0.7	5,608	37.8
Appalachian	698	21.7	48.1	736	22.8	50.7	17	1.2	1,451	44.5
Ind., Ill., etc.	2,364	22.9	41.8	3,119	30.2	55.2	171	3.0	5,654	53.1
Okla., Kans., Mo.	2,469	29.4	51.4	1,992	23.8	41.5	342	7.1	4,803	53.2
Texas Inland	1,843	34.9	63.5	876	16.6	30.2	186	6.3	2,905	51.5
Texas Gulf	3,399	23.6	51.4	3,073	21.4	46.5	137	2.1	6,609	45.9
Louisiana Gulf	861	25.7	62.8	501	14.9	36.6	8	.6	1,370	40.6
Ark. and La. Inland	329	20.3	39.8	443	27.4	53.6	54	6.6	826	47.7
Rocky Mountain	316	28.3	52.2	231	20.6	38.1	59	9.7	606	48.9
California	3,045	22.0	56.8	1,518	11.0	28.3	799	14.9	5,362	33.0
Total	18,282	24.0	51.9	15,099	19.8	42.9	1,913	5.2	35,194	43.8

*Per cent of crude run. †Per cent of total gasoline output.

RUNS TO STILLS AND OUTPUT OF REFINERIES, MAY, 1934

(Thousands of barrels of 42 gallons)

	Crude oil		Unfinished rerun (net)		Natural
INPUT—	Domestic	Foreign	Total	Crude gasoline	Other	gasoline
East Coast	11,619	3,101	14,720	86	—717	40
Appalachian	3,226	.....	3,226	—60	178	17
Ind., Ill., Ky., etc.	10,334	.....	10,334	—18	—380	171
Okla., Kans., Mo.	8,389	.....	8,389	—29	158	342
Texas Inland	5,284	.....	5,284	79	—160	186
Texas Gulf	14,337	59	14,396	729	787	137
Louisiana Gulf	3,283	69	3,352	—34	—26	8
Ark. and La. Inland	1,617	.....	1,617	30	—6	54
Rocky Mountain	1,118	.....	1,118	—29	7	59
California	13,822	.....	13,822	26	—39	*801
Total	73,029	3,229	76,258	780	—198	1,815

OUTPUT—	Gasoline	Kerosene	Gas oil and distillate fuels	Residual fuel oils	Lubricants	Wax (thou. of lbs.)
East Coast	5,608	821	1,358	3,764	749	20,160
Appalachian	1,451	302	231	392	481	7,280
Ind., Ill., Ky., etc.	5,654	414	824	1,462	220	4,760
Okla., Kans., Mo.	4,803	640	666	1,659	249	2,240
Texas Inland	2,905	328	280	1,354	27	280
Texas Gulf	6,609	1,046	2,223	4,204	640	5,040
Louisiana Gulf	1,370	329	360	874	38	2,240
Ark. and La. Inland	826	83	89	471	10	.....
Rocky Mountain	606	13	86	212	.....	—280
California	5,362	572	1,744	5,905	163	.....
Total	†35,194	4,548	7,761	20,297	2,577	41,720

	Coke (tons)	Asphalt (tons)	Road oils	Still gas	Miscellaneous	Shortage
East Coast	12,800	123,700	158	747	32	76
Appalachian	1,800	11,100	44	214	29	121
Ind., Ill., Ky., etc.	42,000	42,900	255	781	9	25
Okla., Kans., Mo.	19,600	4,900	78	424	43	265
Texas Inland	4,800	.....	60	109	12	289
Texas Gulf	11,200	15,600	14	791	51	311
Louisiana Gulf	200	8,700	28	111	.....	133
Ark. and La. Inland	200	8,600	36	44	4	84
Rocky Mountain	—18,200	2,000	110	64	—1	146
California	.....	32,900	208	389	‡5	81
Total	74,400	250,400	991	3,674	184	1,531

*Includes 123,000 bbls. run through pipe lines. †Includes 541,000 bbls. special naphthas. ‡Includes 2,000 bbls. liquefied petroleum gas made from natural gasoline.

CRACKED OPERATIONS

Fresh cracking stock charged to stills—crude, 4,493,000 bbls.; other oils, 35,018,000 bbls.; gasoline produced by cracking, 15,099,000 bbls.; fuel oil produced by cracking, 14,222,000 bbls.

SHIPMENTS OF MOTOR FUEL BY PIPE LINES

(Thousands of barrels of 42 gallons)

	May, 1934	Apr., 1934	May, 1933	Jan.-May, 1934	Jan.-May, 1933
Motor fuel turned into lines	4,022	3,171	3,384	16,899	14,032
Motor fuel delivered from lines	4,005	3,271	3,374	16,917	14,005
Shortage	12	8	6	44	11
Stocks in lines and working tanks end of month	1,253	1,248	1,215	1,253	1,215

Oklahoma Fields

(Continued from Page 50)

feet and shot 80 quarts from 1,750-74 feet, pumped 25 bbls.

Colton, Inc., and others' No. 1-A Teal, SE NE SE Section 25-14-11. Wilcox sand at 2,803-20 feet, total depth, hole full of water, dry and abandoned.

Pringle & Hyer's No. 1 Watson, NE SW NE Section 25-14-11. Wilcox sand at 2,682-96 feet, total depth, water. Plugged back to Dutcher sand at 2,075-2,196 feet, acidized, dry and abandoned.

Hendrix Brothers' No. 11 Harris, SW NW NE Section 1-14-14. Booch sand at 1,095-1,104 feet, total depth, shot 12 quarts, produced 10 bbls.

J. E. Wallace's No. 10 Colbert, C W half NW NW Section 14-14-14. Glenn sand at 1,696-1,734 feet, dry; Fields sand at 1,772-1,804 feet, show oil; total depth 1,818 feet, dry and abandoned.

Claypool and others' No. 1 Corbray, SE SW SW Section 4-13-12, location abandoned.

John Hardy's No. 1 Beams, NW NE NW Section 10-13-16 (O.W.D.D.) Sand at 1,817-26 feet, total depth 1,830 feet, pumped 9 bbls.

Smith and others' No. 1-A Wilson, NW SW NE Section 26-11-11, Booch sand at 2,044-59 feet, total depth. Shot 40 quarts, produced 40 bbls.

Wells and others' No. 6 Micco, SW NE Section 14-10-11, location abandoned.

Phillips and others' No. 2 Fish, SE SW SE Section 25-10-11, location abandoned.

New operations in this area included the following: Sam Kuns' No. 1-B Barnett, SW NW SE Section 13-18-14, drilling 1,290 feet; Turman Oil Co.'s No. 1 Perryman, SE SW SE SW Section 5-17-14, setting 6-inch casing at 1,515 feet; Cummings Brothers' No. 2 Bruner, C SE NW Section 27-17-13, drilling 1,600 feet; Spartan Pipe Co.'s No. 1-A Tiger, SW NW Section 19-16-14, shut down at 100 feet for water; Young and Babcock's No. 1-A Lowery, SW NW NW Section 21-16-15, drilling at 1,200 feet; Peterson and others' No. 1-A McKinney, SW NE NW Section 16-15-14, drilling 860 feet; R. L. Unger's No. 1-B Harrison, NE NW SE Section 25-15-14, rigging up; Colton and others' No. 1-A Berryhill, C NW NW Section 20-14-13, drilling 560 feet; Ray Vincent and others' No. 1 Carter, SW SE SE Section 13-13-10, rig; Sheppard and others' No. 1-B (Twin) Flowers, SE SW SW Section 5-13-16, drilling 700 feet; Barnsdall Oil Co.'s No. 1-A Holmes, SW NE Section 27-12-11, rig

and tools; Eagle Picher Lead & Zinc Co.'s No. 2-A Hope, NE NW SE Section 26-12-12, drilling 720 feet; Rossiter and others' No. 1 Barrett, NW NE SW Section 31-12-13, drilling 275 feet.

Greater Seminole Area

In the North Keokuk Pool, Carter Oil Co. and others' No. 1 Smith, C W half SE SE Section 14-11-6, found production in the Wilcox sand from 4,520 to 4,525 feet, total depth, swabbing 286 bbls. of oil and 102 bbls. of water in 13 hours. It had not been completed.

Carter Oil Co. and others' No. 1 Pipkin, C N half SE NW Section 2-10-6, Keokuk Pool, Seminole County, treated with acid and flowed 345 bbls. in eight hours. Production is from Misener sand at 4,124-39 feet, total depth. It had not been completed.

In the Earlsboro sector, Atlantic Oil Producing Co. and Sinclair Prairie completed their No. 3 Foreman, C W half NE NW Section 18-9-5, for 519 bbls., flowing through tubing. Hunton lime was acidized at 4,100-20 feet, total depth.

Darby and Lippa's No. 1 Barrett, C NW SE Section 19-9-5, swabbed 154 bbls. after acid treatment of the Hunton lime from 4,129-52 feet. Total depth was 4,158 feet in Sylvan shale. It was completed.

In the East Seminole sector, Campbell and others will abandon their No. 1 Lorraine, NE SE NW Section 20-9-7, after failing to get production in the Gilcrease, Hunton lime and Viola lime formations. Total depth was 4,242 feet.

The Olympic Oil Co.'s No. 1-A McClassen, C SE NW NW Section 12-9-8, Hughes County, gauged 37,000,000 feet of gas and sprayed an estimate of 15 bbls. of oil. Production is from the Cromwell sand found at 3,435-78 feet, total depth.

In the Holdenville sector, Elliott and Shell Petroleum Corp.'s No. 4 Pickens, CEL SE NW NE Section 15-7-8, was completed for 200 bbls. on swab after Calvin sand at 1,165-76 feet was given a 40-quart shot. Total depth was 1,200 feet.

Mainard and others' No. 6 Moore, C E half NW NE Section 22-7-8, had Calvin sand from 1,178 to 1,201 feet, total depth, yielding 40 bbls. on pump after a light shot. It was being cleaned out for another production test.

The Winona Oil Co., Jarvis and Holm Drilling Co.'s No. 1 Myers, SE SW NE Section 31-7-8, Seminole County, has been tagged a Wilcox sand producer, sand being found from 4,214 to 4,216 feet, total depth. Its completion gauge was 2,864 bbls. oil and 4,500 bbls. water, wide open. Oil is accompanied by 10,000,000 feet of gas.

St. Louis Area

In the St. Louis sector, Pottawatomie County, Hodge Drilling Co.'s No. 1 Gregory, NW SW Section 29-8-4, flowed 200 bbls. in 12 hours from Misener sand found from 4,366 to 4,370 feet, total depth. It was not a completion.

Jones and others' No. 1 Brandenburg, SW SE Section 3-7-4, flowed 80 bbls. in 12 hours from Cromwell sand, 3,474-3,508 feet. It had not been completed.

Charles Liddell's No. 1 Brandenburg, NW SE SW Section 3-7-4, produced 80 bbls. with the tools lost in the hole. It had Hunton lime from 3,715 to 3,798 feet, total depth, but production was coming from a sand found at 3,501 to 3,540 feet, which earlier had gauged 375 bbls. in 24 hours flowing. It was completed.

Sinclair Prairie Oil & Gas Co.'s No. 3 Deathridge, SE NE NW Section 28-7-4, had Simpson dolomite from 4,148-54 feet, total depth. Well was plugged back 2 feet to 4,150 at which depth it was completed for 817 bbls. of oil and 900 bbls. of water.

Magnolia Petroleum Co.'s No. 2 Martin, NE SE NW Section 34-7-4, South St. Louis, was completed for 200 bbls. on the pump. Producing formation was Hunton lime from 3,966 to 4,010 feet. Total depth was 4,012 feet in Sylvan shale.

Southwest of the St. Louis Pool and between the Asher and West Asher pools, Frank Russell got a dry hole in his No. 1 Davis, SE cor. Section 24-6-3. Viola lime was had from 3,774 to 3,779 feet, total depth, being dry. Drill pipe was lost in the hole and it was abandoned.

There were no new locations staked in the St. Louis area during the past week.

Pontotoc County

The Beebe Pool of Pontotoc County had no completions this last week and only one new operation, that being Moore and Deaner's No. 2 Gray "B," NE SW NE Section 25-5-4, spudding.

The Fitts Pool registered two completions in Manahan Drilling Co. and Sledge Drilling Co.'s No. 1 Norris, NW SE SE Section 13-2-6, which was dry and abandoned at 5,166 feet, 46 feet in Sylvan shale, and W. F. Merrick, Inc.'s No. 1 Morris, SE cor. Section 14-2-6, which also was a dry hole at 4,005 feet. Cromwell sand topped in the latter at 3,680 feet failed to produce.

W. A. Delaney's No. 2 Craddock, NE cor. Section 25-2-6, swabbed and flowed 322 bbls. in 24 hours from what was believed to be Wilcox sand, top not determined. Total depth was 4,448 feet.

The deepest test in this area to date is Magnolia Petroleum Co.'s No. 1 Norris, NW SE SE Section 18-2-7, which was drilling at 5,808 feet in dolomite formation with nothing showing.

Blackstock and others' No. 1 Lewis, NE SE Section 19-2-7, another deep test in this area, was drilling ahead at 4,708 feet in dolomite. This well showed for a small well in the Viola lime.

J. C. Shaffer has the gas mudded off in his No. 1-A Hardin, NE NW SW Section 30-2-7, and was drilling in Mayes formation at 3,029 feet. This well produced 40,000,000 feet of gas from sand at 2,423-35 feet.

Pontotoc County has a wildcat test started in Schermerhorn Oil Co.'s No. 1 Banks, SW SE SE Section 16-2-6, location.

SOUTHERN FIELDS

Marshall County

Centrop Oil Co. has completed its No. 5 Burge, NW SE NE SE Section 25-7s-5e, Marshall County, for 23 bbls. Sand was at 512-33 feet, total depth.

R. A. Godfrey's No. 1 Cox, SW SE SE NE Section 26-7s-5e, was completed for 6 bbls. on pump from sand at 358-65 feet, total depth.

There were two new starts in Marshall County over the week: R. A. Godfrey's No. 5 Burge, CSL SW SE SE Section 25-7s-5e, rigging up machine; L. F. Wham and others' No. 1 Ulrich, SE NW SW Section 36-7-5e, drilling 130 feet.

Jefferson County

There was one completion and one new location in Jefferson County over the week, both by the same operator. O. V. Beck completed No. 4 Seay, SE SW NW SE Section 34-6s-5w, for 75 bbls. of oil from broken lime and sand found at 1,504-88 feet, total depth. Well No. 5 on this same lease was a new location in the NE SW NW SE Section 34-6s-5w and was being rigged up.

Carter County

Skelly Oil Co.'s No. 1 Higgins, SW SE NW Section 8-2s-2w, had sand series from 1,300 to 2,775 feet and was completed for 22 bbls. of oil, flowing by heads with 6,500,000 feet of gas. Top of the first oil sand was 1,695 feet. Total depth was 2,800 feet.

Stephens County

Mudge Oil Co.'s No. 8 Oliver, NE SE SE SE Section 22-1s-5w, Stephens County, was good for 9 bbls. on the pump from sand found from 612-25 and 664-95 feet, total depth.

Skelly Oil Co. staked a location for its No. 7 Harmon, NE cor. Section 27-1s-5w, Stephens County, and have the rig up.

Kansas Wildcats

(Continued from Page 56)

Deitrick et al's No. 1 Fitzpatrick, C NE NE Sec. 30-21-8w.
Drlg. 2,075 ft.

Elwell et al's No. 1 Porter, NE NW Sec. 5-18-7w.
Bldg. rig.

Gypsy Oil Co.'s No. 1 Malone, SE NE NE Sec. 20-20-9w.
Siliceous lime 3,340-58 ft.; dry and abd.

Langston et al's No. 1 Markle, NE SW Sec. 1-20-9w.
T.D. 2,425 ft.; S.D.

Reserve Dev. Co.'s No. 1 Heins, NE SW SE Sec. 8-18-10w.
Siliceous lime 3,256-69 ft.; T.D.; acidized; pump 20 bbls. daily; may abandon.

Robertson et al's No. 1 Johnson, NW cor. SW Sec. 22-19-8w.
Drlg. 1,700 ft.

ROOKS COUNTY

Ashby et al's No. 1 Doughty, C SW SW Sec. 15-8-19w.
Drlg. 2,325 ft.

Phillips Pet. Co.'s No. 1 Dopita, C SW SW Sec. 31-8-17w.
Acidized 3,312-17 ft.; pumped 103 bbls. oil, 11 bbls. wtr. in 14 hrs.; re-treatg. with acid.

RUSH COUNTY

Central States L. & P. Co.'s No. 1 Basgall, SE cor. Sec. 10-17-16w.
Location.

RUSSELL COUNTY

Blair et al's No. 1 Funk, SW NW SE Sec. 16-14-14w.
Location.

Blair et al's No. 1 Hill, SW NE Sec. 14-13-14w.
S.O. 2,760-65 ft.; S.D. 2,782 ft.

Lario et al's No. 1 Nudenthal, NE NE Sec. 23-14-15w.
Rigging up.

J. H. Liggett's No. 1 Chrisler, C SW SW Sec. 9-11-15w.
H.F.W. 3,260 ft.; T.D. 3,263 ft.; fishing.

SEDGWICK COUNTY

Bar Key Pet. Co.'s No. 1 Swenson, C NE Sec. 6-26-2.
S.O. 2,978 ft.; T.D.; S.D.

Corn & Aylward's No. 1 Heck, NW SW Sec. 2-27-1w.
Drlg. 3,110 ft.

Cromwell & Lewis' No. 1 Hammond, SW NW Sec. 23-27-2w (O.W.D.D.).
Rigging up.

D. Lauck's No. 1 Gillespie, NE SE SW Sec. 6-28-1w.
Chat 3,333 ft.; 3,344 ft., est. 2,000,000 ft. gas; 3,358-75 ft. small S.O.; 3,390-3,400 ft. S.O. and wtr.; T.D. 3,691 ft. in Viola; P.B. to chat; shot 40 qts. 3,354-84 ft. and acidized 1,000 gals.; S.D.

Shawver et al's No. 1 Schulte, NE NE Sec. 13-28-2w.
Drlg. 2,953 ft.

Sovereign Oil Co.'s No. 1 Nichols, C NW SE Sec. 20-25-1w.
Drlg. 2,405 ft.

Trees Oil, Derby Oil et al's No. 1 McMinn, NW SW NE Sec. 36-26-1e.
Drlg. 2,219 ft.

STAFFORD COUNTY

Stanolind O. & G. Co.'s No. 1 Denker, CNL SW NW SW Sec. 10-22-12w.
Siliceous lime 3,876-80 ft., T.D.; dry and abd.

Vickers and Phillips' No. 1 Cravens, SW NE Sec. 15-25-11w (O.W.D.D.).
Base Viola 4,025 ft.; S.D. 4,085 ft.

SUMNER COUNTY

Morgan & Flynn's No. 1 Mercer, NW NE NW Sec. 36-32-1w.
T.D. 3,345 ft.; S.D.

Wentz and Continental's No. 1 Small, NW SW Sec. 5-33-4w.
Rigging up rotary.

TREGO COUNTY

Alma Pet. Co. et al's No. 1 Rhodes estate, SW SW Sec. 14-11-23w.
Siliceous lime 3,978-4,020 ft.; dry; S.D. for repairs.

Mid-Kansas O. & G. Co.'s No. 1 Kline, SW SE Sec. 19-14-24w.
T.D. 800 ft.; S.D.

WASHINGTON COUNTY

Rose Oil Co. et al's No. 1 Penwell, NE NW SE NE Sec. 16-3-3 (O.W.D.D).
Old T.D. 1,720 ft.; rigging up to deepen.

WOODSON COUNTY

Sheedy et al's No. 1 Hassenpflug, NW cor. NE Sec. 34-25-14.
T.D. 1,604 ft.; dry and abnd.

Schwartz et al's No. 1 Collins, SW NW NE Sec. 30-23-14.
S.D. 200 ft.

Gulf Coast Wildcats

(Continued from Page 52)

Windsor Oil Co.'s No. 1 Colby, 325 ft. from NW line and 330 ft. from NE line of 50-ac. lease in T. Sproggins Sur.
Drlg. gumbo 2,506 ft.

STRATTON RIDGE—BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 5 Seaborn, Austin-Williams Sur., 600 ft. E of No. 3 and 229 ft. S at R/A.
Stuck D.S. 7,202 ft.; S.D. 6,250 ft.

WEST COLUMBIA—BRAZORIA COUNTY

Miramar Oil Corp.'s No. 3 Hogg, 100 ft. N of No. 2 and 100 ft. from W line of lease.
T.D. 5,360 ft.; P.B. 2,400 ft.; drlg. heaving shale 5,165 ft.

Texas Co.'s No. 84 Hogg, 2,483 ft. N, 50 ft. W from SE cor. of lease in M. Varner Sur.
Drlg. gumbo, lime and shale 4,092 ft.

BARBERS HILL—CHAMBERS COUNTY

Mills Bennett Prod. Co.'s No. 3-B Gulf fee, 25 ft. out of SE cor. of lease.
Top salt 1,402 ft.; drlg. sandy shale 4,322 ft.; show oil.

Mills Bennett Prod. Co.'s No. 9-B Wilburn, Henry Griffith league, 737 ft. E W line and 190 ft. S N line of lease.
Drlg. salt 2,036 ft.

Humble O. & R. Co.'s No. 6-D Kirby, 593 ft. N of S line, 388 ft. E of W line of lease, or 125 ft. N and 288 ft. W of No.8.
Drlg. salt 3,796 ft.; crooked hole.

Moody Corp.'s No. 5-A E. W. Barber, 100 ft. E of W line and 70 ft. N of S line of lease.
T.D. salt 3,260 ft.; P.B. 1,238 ft.; W.O.C.

Moody Corp.'s No. 6-A Barber, 75 ft. W of E line and 400 ft. N of S line of lease.
Reaming 1,394 ft.

Sinclair Prairie Oil Co.'s No. 18-A Wilburn, Henry Griffith league, 150 ft. W of No. 17-A and 14 ft. S N line of lease.
Top salt 1,379 ft.; drlg. salt 2,475 ft.

Sun Oil Co.'s No. 9 Chambers Co., 181 ft. W of No. 8 and 50 ft. from N line of lease.
Drlg. shale and lime 3,771 ft.

Sun Oil Co.'s No. 5 Higgins, 125 ft. W of No. 4.
Base salt 3,698 ft.; drlg. oil sand 3,910 ft.

Sun Oil Co.'s No. 16 Wilburn fee, 130 ft. W of No. 15 and 40 ft. from N line of 20-ac. tract in Wm. Hodges Sur.
Top sand 4,926 ft.; T.D. 4,958 ft.; swab 875 bbls. ⅝-in. choke; 350 lbs. pressure.

Texas Co.'s No. 7 Wilburn, 116 ft. S of Humphrey's No. 8-H Kirby, in Henry Griffith league.
T.D. 4,935 ft.; prep. to set whipstock.

Texas Gulf Prod. Co.'s No. 3 A. E. Barber, 400 ft. S of N line and 50 ft. E of W line of lease.
Reaming 5,101 ft.

Texas Gulf Prod. Co.'s No. 2 Eberspacher, 480 ft. from S line and center of strip No. 4.
Drlg. 524 ft.

Texas Gulf Prod. Co.'s No. 4 Wilburn, Wm. Hodges Sur., 330 ft. N of S line, 50 ft. W of E line.
T.D. 5,059 ft.; swabbing little oil, gas, wtr., and mud.

Yount Lee Oil Co.'s No. 24 Chambers County, 400 ft. W of No. 23 in line with No. 21.
T.S. 1,456 ft.; base salt 3,780 ft.; plug 3,789 ft.

Yount Lee Oil Co.'s No. 25 Chambers County, 75 ft. S, 50 ft. W of NE cor. of lease.
Sand rock 385 ft; standing.

Yount Lee Oil Co.'s No. 27 Chambers Co., 400 ft. W of No. 24 and in line with Nos. 24 and 21.
Reaming 3,433 ft.

Yount Lee Oil Co.'s No. 8 Phillips, Wm. Hodges Sur.
Top sand 3,354 ft.; T.D. 4,282 ft.; prep. to swab.

BLUE RIDGE—FORT BEND COUNTY

San Jacinto Oil Co.'s No. 4 Blakley, 2,460 ft. W of E line, 190 ft. S of N line of Edwards Drew Sur.
Rigging up.

RABBS RIDGE—FORT BEND COUNTY

Gulf-Humble's No. 11-A F. D. Booth, J. Rabb Sur.
T.D. 5,355 ft.; P.B. to 5,345 ft.; comp. 116 bbls. day ¼-in. choke, 30 per cent b.s. and w.; T.P. 420 lbs., C.P. 1,300 lbs.

Gulf Prod. Co.'s No. 4 A. Hammerstrom, 2,900 ft. from N line, 4,100 ft. W of Brazos river, which is E line of Samuel Kennedy Sur.
Drlg. shale and lime 4,928 ft.

Humble-Gulf's No. 28-A Lockwood & Sharp, 379 ft. from S line and 2,572 ft. from E line of "A" lease in J. Rabb Sur.
Derrick.

Humble-Gulf's No. 29-A Lockwood & Sharp.
Location.

Humble-Gulf's No. 28-D Lockwood & Sharp.
Location.

Humble-Gulf's No. 30-A Lockwood & Charp, 4,296 ft. W of E line and 293 ft. S of N line of lease in J. Rabb Sur.
Location.

Humble-Gulf's No. 31-A Lockwood & Sharp, 5,170 ft. W of E line and 292 ft. S of N line of lease in J. Rabb Sur.
Location.

Humble-Gulf's No. 32-A Lockwood & Sharp, 6,391 ft. W of E line and 293 ft. S of N line of lease and 1,149 ft. W of No. 31-A in J. Rabb Sur.
Location.

Humble-Gulf's No. 11 Meyers, 410 ft. W of E line of Myer 180-ac. tract and in center of tract being 292 ft. N of S line of John Rabb Sur.
T.D. shale 913 ft.; W.O.C.

Naylor's No. 4 S. B. Gehr, 1,260 ft. from W line and 330 ft. from S line of lease in Samuel Kennedy Sur.
T.D. 5,406 ft.; comp. 15 bbls. oil and 15 bbls. salt water.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 40 Moore.
Drlg. sand rock 3,161 ft.

HIGH ISLAND—GALVESTON COUNTY

Brusard & Brookner's No. 1 Nebout.
Drlg. 299 ft.; no report.

Yount Lee Oil Co.'s No. 4 Broussary & Orme, M. Dunman Sur., 129 ft. SW of No. 3.
Top salt 4,565 ft.; T.D. 5,357 ft.; W.O.C.

Yount Lee Oil Co.'s No. 41 Cade, Fitzsimmons Sur.
Drlg. hard sand 3,610 ft.

Yount Lee Oil Co.'s No. 40 Cade, 430 ft. NW of No. 2-B, 360 ft. from E line of lease and in line with No. 39 and No. 2-B Fitzsimmons Sur.
Drlg. hard sand 4,385 ft.

Yount Lee Oil Co.'s No. 22 Smith.
Drlg. sand 4,362 ft.; no report.

Yount Lee Oil Co.'s No. 24 Smith.
Sand 5,929 ft.; S.D.

Yount Lee Oil Co.'s No. 42 Cade, N. Fitzsimmons Sur., half way between Nos. 26 and 28 and 150 ft. E at right angles.
Derrick.

Yount Lee Oil Co.'s No. 1 Waco Stewart, Martin Dunman Sur.
Rigging up.

ARRIOLA—HARDIN COUNTY

Republic-Houston's No. 2-X Arriola fee.
Drlg. 5,615 ft.

Republic-Houston Oil Co.'s No. 8 fee.
Drlg. sandy shale 4,270 ft.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 110 Jordit, 260 ft. due S No. 108.
T.D. 1,484 ft.; swbd. 8W.; set whipstock and milling 1,328 ft.

Sinclair Oil Co.'s No. 1 Teel Estate, 3,685 ft. W of E line of league, 4,285 ft. S of N line of league, or 1,032 ft. S of N line and 717 ft. W of E line of 134-ac. tract.
Drlg shale 5,118 ft.

Skinner Oil Co.'s No. 3 Sessler.
T.D. 2,230 ft.; lost returns; S.D.

SOUR LAKE—HARDIN COUNTY

Alpha Pet. Co.'s No. 1 J. M. Weiss, 122 ft.

S of Steinberger's No. 1 Weiss in Blk. 25.
T.D. 7,012 ft.; prep. to set screen.
Alpha Pet. Co.'s No. 2 Weiss estate, 66 ft. N and 100 ft. W from SE cor. of 5-ac. tract in Lot 25, H. Williams Sur.
Location.
Humble O. & R. Co.'s No. 1 Kirby et al, 140 ft. E W line and 300 f.. S N line of old Gulf 170-ac. tract, E. Jackson Sur.
Drlg. hard sand 5,072 ft.
Parr et al's No. 1 Benard, in W.C.R.R. Sur. No. 69 (west edge).
T.D. 7,061 ft.; P.B. 4,800 ft.; making est. 25 bbls. daily.
Steinberger Pet. Co.'s No. 1 Weiss, 150 ft. W of Parr No. 1 and 50 ft. out of SE cor. of Blk. 25, H. B. Williams Sur.
Location.
Texas Co.'s No. 309 fee, 302 ft. S and 48 ft. E of No. 308 fee, in Stephens Jackson League.
Drlg. 560 ft.
Yount Lee Oil Co.'s No. 6 Lynn, 250 ft. from W line and 200 ft. from N line of 43-ac. tract in Sour Lake Oil Co. Sub.
Drlg. salt 7,520 ft.; (no report).

GOOSE CREEK—HARRIS COUNTY

Edwards Drlg. Co.'s No. 2 Matthews, E offset to Mirimar's No. 2 Hughes.
T.D. 4,566 ft.; comp. 111 bbls. 12 hours ⅝-in. choke; T.P. 265 lbs., C.P. 350 lbs.
Herring's No. 1 Williams, 180 ft. from SE cor. and 55 ft. NE of Hybush's No. 3, in W. Scott upper league.
Cellar.
Hoffner & Moore's No. 1 A. A. Wright, 50 ft. N and 50 ft. E of SW cor. of Blk. 7, Wm. Scott Sur., Abst. No. 65.
T.D. 5,221 ft.; shale; abandoned.
Humble O. & R. Co.'s No. 80 Simms-Smith, Drlg. shale 2,545 ft.
Humble O. & R. Co.'s No. 28 Sweet, 13 ft. W of SE cor. of Scott 2½-ac. tract and 53 ft. from N line of lease, Wm. Scott Sur. No. 67.
Location.
Humble O. & R. Co.'s No. 29 Sweet, 418 ft. from N line of Sweet lease and 33.8 ft. E of SW cor. of Hanzen's 1-ac. tract in Wm. Scott Sur.
Drlg. hard sand 4,025 ft.
Jay Simmons' No. 1 Dannebaum, 45 ft. from S and 50 ft. from E lines of lease in W. Scott Labor Sur.
Derrick.

HUMBLE—HARRIS COUNTY

Imperator Oil Co.'s No. 1 N. N. Lee, 400 ft. from E line and 150 ft. from N line of 88-ac. tract in E. Ruhl Sur.
Drlg. gumbo 1,700 ft.
Rio Bravo Oil Corp.'s No. 8 fee, 250 ft. E. 100 ft. S of No. 2 fee.
Drlg. shale 4,575 ft.
Texas Co.'s No. 47 Stevenson, J. B. Stevenson Sur., 859 ft. E, 457 ft. S of NW cor., Lot 1-A.
T.D. 5,338 ft.; abd.
Texas Co.'s No. 48 Stevenson, 485 ft. S and 359 ft. E of NW cor. of Lot No. 1-A, J. B. Stevenson Sur.
Rigging up.

PIERCE JUNCTION—HARRIS COUNTY

Benedum & Trees' No. 1 W. J. Settegast, 3,629 ft. from S line of Sur., and 100 ft. from E line of tract in the J. Kopman Sur.
Rigging up and S.D.
Gulf Prod. Co.'s No. 10 H. C. Cain, 399 ft. S and 290 ft. E of NW cor. of lease and 217 ft. N of No. 9, 160-ac. tract in J. Hamilton Sur. No. 879.
Drlg. sand 4,085 ft.
Hamil & Smi h's No. 1 Gulf fee, 54 ft. from N cor. of Lot No. 24, and 413 ft. from W line of No. 24, on line between Lots 22 and 24, W. H. Tores Subd., B.B.B.&C. Sur. No. A-179.
Drlg. shale 2,452 ft.
Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor. "A" lease, J. A. Kopman Sur.
T.D. 4,510 ft.; rigging up to work over; standing.
Rio Bravo Oil Corp.'s No. 12-A Settegast, 1,410 ft. N line, 650 ft. E line, J. A. Kopman Sur.
T.D. 5,433 ft.; drlg. shale 5,093 ft.

TOMBALL—HARRIS COUNTY

Amerada-Rycade's No. 1-A Metzler, J. House Sur.
Spud.
Amerada-Stanolind's No. 1 F. Hirsch.
Bldg. derrick.
Amerada-Stanolind Oil Co.'s No. 4 Rudel, 500 ft. from S line and 500 ft. from W line of tract in J. House Sur.
T.D. 5,577 ft.; comp. 17½ bbls. hr. ¼-in. choke.
Houston Oil Co.'s No. 1 Fred Heard, 335 ft. from N line and 691 ft. from E line of lease in J. M. Hooper Sur.
Drlg. shale and shells 5,380 ft.
Humble-Magnolia's No. 2 C. F. W. Hendricks, 966 ft. S of N line and 466 ft. W of E line of 96-A, tract in Wm. Heard Sur.
Drlg. shale 740 ft.
Humble-Magnolia's No. 1 Krug, 600 ft. N and 187 ft. E from SW cor. of J. F. W. Kobs, 30.6-ac. tract in J. H. Edwards Sur.
Location.
Humble-Magnolia's No. 2 Krug, 466 ft. from E line of lease and 800 ft. S of S line of Sherer 112-ac. tract in J. H. Edwards Sur.
Location.
Humble & Magnolia Pet. Co.'s No. 2 B. J. Petrick, 700 ft. S of N line, 1,171 ft. W of E line of lease in J. M. Hooper Sur. No. A-372.
Derrick.
Humble & Magnolia's No. 2 Rudel-Oster, 150 ft. S of Amerada & Stanolind's No. 2 Fletcher, half way between E and W lines of 50-ac. tract in J. House Sur. No. 34.
T.D. 5,575 ft.; comp. 18 bbls. hr. ¼-in. choke.
Humble O. & R. Co.'s No. 3-B M. A. Quilter, 466 ft. from N line and 330 ft. from W line of most northerly NW cor. of 300-ac. "B" lease.
T.D. 5,546 ft.; W.O.C.
Humble O. & R. Co.'s No. 1 F. Theis, 550 ft. from S line and 584 ft. from E line of 175-ac. tract in C. N. Pillot Sur.
Drlg. shale 5,490 ft.
Humble-Magnolia's No. 2 Jacob Theis, O. Goodrich Sur. No. A-311.
Drlg. shale 977 ft.
Humble O. & R. Co.'s No. 1 Werner.
T.D. 5,611 ft.; abd.
Sun and Humble O. & R. Co.'s No. 1 Metzler, 34 ft. N and E of NE cor. of 2-ac. graveyard in 90-ac. lease in C. N. Pillot Sur. No. 632.
Drlg. shale and lime 3,059 ft.
Texas Co.'s No. 2 R. W. Hirsch, 100 ft. from N line and 364 ft. from W line of 57-ac. lease in J. House Sur.
T.D. 5,602 ft.; running tubing.

FANNETTE—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 15 Thomas, 200 ft. W of Gulf's No. 7 Burrell.
Location.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 3 Davis, 400 ft. N of No. 2, Joseph Kokernut Sur.
Location.
General Crude Oil Co.'s No. 4 Davis, 400 ft. N of No. 3, Joseph Kokernut Sur.
Location.
General Crude Oil Co.'s No. 12 Moore's Bluff, 2,100 ft. S of N line and 2,932 ft. W of E line of survey and tract, Moore's Bluff lease.
T.D. 3,006 ft... comp. for gasser with some oil.
General Crude's No. 13 Moore's Bluff, 150 ft. W of E line and 2,100 ft. S of N line of lease and 1,000 ft. N of No. 12.
Location.
General Crude Oil Co.'s No. 8 Davis, 660 ft. from S and 1,000 ft. from E line of lease in D. Kokernut Sur.
Drlg. shale and lime 3,772 ft.

HANKAMER—LIBERTY COUNTY

George Devore et al's No. 1 S. E. Exell, 175 ft. S of Gulf's No. 1 and 165 ft. from E line of 175-ac. lease in Levi Barrow Sur.
Derrick.
Mirimar Oil Co.'s No. 2 Crow & Jacobs, H. &T.C. Sur. No. 21.
T.D. 4,534 ft.; W.O.C.

HULL—LIBERTY COUNTY

Flynn's No. 2 Flynn, J. Devore Sur.
T.D. 1,500 ft. S.D.
Gulf Prod. Co.'s No. 104 Phoenix, 2,479 ft. from W line and 1,115 ft. from S line of 300-ac. trac. in J. Devore Sur.
Drlg. sandy shale 3,523 ft.
Gulf Prod. Co.'s No. 103 Phoenix.
Drlg. sandy shale 4,050 ft.
Hanna Oil Co.'s No. 1-B Hanna, 50 ft. E line and 533 ft. S line of 20-ac. lease in J. Devore Sur.
Drlg. shale and boulders 715 ft.
Republic Prod. Co.'s No. 153 Dolbear, 400 ft. N and 45 deg E. from No. 151, in the J. Devore Sur.
Drlg. sand and shale 5,333 ft.
Republic Prod. Co.'s No. 155 Dolbear.
Rigging up.
Repu lic Prod. Co.'s No. 154 Dolbear, 285 ft. NW of No. 152 and in line with No. 140 and 280 ft. SW of No. 74.
T.D. 2,111 ft.; pumped 250 bbls. fluid, some salt water.
Sun Oil Co.'s No. 7-A Carr, 200 ft. W of E line and 277 ft. S of N line of lease.
T.D. 5,185 ft.; comp. 12 bbls. hr. ¼-in. choke.
Texas Co.'s No. 7 Barrow fee, 458 ft. S and 350 f.. W of NE cor. of tract in J. Devore league.
Reaming 5,200 ft.; T.D.; P.B. to 5,003 ft.; comp. 120 bbls. daily swabbing.

LIBERTY COUNTY

Mrs. I. M. Lemon Oil Co.'s No. 1 Richardson, 120 ft. E of Gulf & Humble's No. 1 Carter, in M. G. White Sur.
T.D. 3,882 ft.; rerun tubing; standing.

MARKHAM—MATAGORDA COUNTY

Hamill & Hamill's No. 1 Hudson, SE side of dome.
Drlg. 2,000 ft.
Hamil & . owers' No. 4 Myers, 150 ft. from N, 225 ft. NW of No. 1, in Wm. Hadden Sur.
T.D. 3,329 ft.; comp. 400 bbls. day ¼-in. choke.
Hawkins Oil Co.'s No. 1 Hawks fee, 1,350 ft. from N line and 1,650 ft. from E line of 20-ac. lease.
Rigging up.
Powers Prod. Co.'s No. 3 N. R. Myers, 100 ft. from N and 150 ft. E. of SE¼ of Blk. No. 1.
W.O.C. 408 ft.
Rio Bravo Oil Co.'s No. 1 Sisk, 550 ft. N. 650 ft. W SE cor. of R. J. Sisk's 158-ac. tract in Lot 2, Wm. Haddon league.
Drlg. shale and lime 1,515 ft.

CONROE—MONTGOMERY COUNTY

American Liberty Oil Co.'s No. 2 Allen.
Drlg. shale 1,224 ft.
Brown & Wheeler's No. 1 Walters.
T.D. 5,100 ft.; comp. 70 bbls. hr. ½-in. choke.
Gulf Coast Drlg. & Prod. Co.'s No. 27 Keystone Mills.
T.D. 5,039 ft.; comp. 430 bbls. ¼-in. choke.
Gulf Coast Drlg. & Prod. Co.'s No. 2 J. L. Hensley.
Drlg. 5,090 ft.
Gulf Coast Drlg. & Prod. Co.'s No. 3 E. E. Hensley.
T.D. 5,030 ft.; W.O.C.
Humble O. & R. Co.'s No. 1 Cameron.
T.D. 5,127 ft.; comp. 84 bbls. hr. ½-in. choke.
Humble O. & R. Co.'s No. 25 Keystone Mills.
T.D. 5,120 ft.; comp. 81 bbls. hr. ½-in. choke.
Humble O. & R. Co.'s No. 39 Madeley.
T.D. 5,139 ft.; W.O.C.
Humble O. & R. Co.'s No. 66-A South Texas Dev. Co.
T.D. 5,187 ft.; W.O.C.
Humble O. & R. Co.'s No. 68-A South Tex. Dev. Co.
T.D. 5,183 ft.; comp. 14 bbls. hr. 3/16-in. choke.
Humble O. & R. Co.'s No. 8-D South Texas.
Drlg. 5,140 ft.
Pine Tree Oil Co.'s No. 1 South Texas.
Shale 5,182 ft.; W.O.C.
Showers & Moncrief's No. 3 B. Dunn.
T.D. 5,097 ft.; comp. 25 bbls. hr. ¼-in. choke.
Strake Oil Co.'s No. 3 Hammond.
Drlg. 4,800 ft.
Sun Oil Co.'s No. 14 Keystone Mills, 1,760 ft. from N line, 2,274 ft. from W line of lease in A. Steele Sur.
Drlg. shale and lime 4,735 ft.
Sun Oil Co.'s No. 2 South Texas, 943 ft. N of No. 1 and in center of lease E and W in T.&N.O. Sur. No. 5.
Rigging up to work over.
Tide Water Oil Co.'s No. 1 Eichletz-McKibben, 592 ft. from N line and 19 ft. from E line, which is Tide Water's W line on the Eichletz lease, in L. Smith Sur.
T.D. 5,100 ft.; comp. 96 bbls. hr. ½-in. choke; T.P. 650 lbs., C.P. 750 lbs.

PORT NECHES—ORANGE COUNTY

Texas Co.'s No. 1 Orange Natl. Bank, 150 ft. E and 150 ft. S of NW cor. of tract in Jacob Beaumont Sur.
Prep. to work over; T.D. 4,799 ft.
Texas Co.'s No. 2-B Polk, 695 ft. N, 150 ft. S of NE cor. of N. Jacob Beaumont Sur.
T.D. 6,708 ft.; sidetracking.

LIVINGSTON—POLK COUNTY

Gem Oil Co.'s No. 1 Davis Holmes, 350 ft. N and E from most northerly SE cor. of A. E. Munson tract in A. Viesca Sur.
Killed well; will deepen.
H. B. Owenby's No. 1 Duff, 78 ft. N of S line, 656 ft. W of E line of lease in A. Viesca Sur.
T.D. 4,350 ft.; S.D.
Wer.y et al's No. 1 Dick & Failing, 1,421 ft. W of E line and 320 ft. N of S line of tract in A. Viesca Sur.
T.D. 4,344 ft.; prep. to test; D.S. test 4,317-42 ft.; 15 min.; ¾-in. choke top and bottom; 20 fourbles oil, 2 fourbles mud cut with oil and fresh wtr.; 250 lbs. pressure.

GRETA—REFUGIO COUNTY

Atlantic & Stanolind's No. 64 J. M. O'Brien, 466 ft. E line of lease and 933 ft. N of Winfield Sur. No. 63.
Drlg. 1,000 ft.
Floboots Oil Co.'s No. 2-D J. M. O'Brien, E. H. Winfield Sur., 466 ft. S N line and midway E and W lines, Blk. 12.
T.D. 4,408 ft.; tested 45 joints oil and 1 joint mud.
Floboots Oil Co.'s No. 2-E J. M. O'Brien, E. H. Winfield Sur., 466 ft. S N line and midway E and W lines, Blk. 10.
T.D. 4,387 ft.; comp. 287 bbls. 3/16-in. choke.
Floboots Oil Co.'s No. 2-F O'Brien, Peoples Sur., 466 ft. S N line and midway E and W lines, Blk. 8.
T.D. 4,386 ft.; testing.
Floboots Oil Co.'s No. 4-C J. M. O'Brien, 503 ft. from E line and 466 ft. from S line of Blk. 8, Peoples Sur.
T.D. 4,390 ft.; comp. 350 bbls. day 3/16-in. choke.; T.P. 275 lbs., C.P. 300 lbs.
Hewitt & Dougherty's No. 8 Lambert, 460 ft. from N line and 507 ft. from E line of Blk. 18, E. W. Harper Sur.
Rigging up.
Hewitt & Dougherty's No. 23 M. F. Lambert, 466 ft. from S line and 507 ft. from E line of Blk. 16, Hardwick Sur.
Drlg. shale 3,317 ft.
Houston Oil Co.'s No. 14 W. J. J. Heard, 550 ft. NW of No. 5 and 330 ft. NE of SW line of lease.
T.D. 4,950 ft.; comp. 250 bbls. day 5/16-in. choke, 250 lbs. T.P.
Houston Oil Co.'s No. 15 Heard, 660 ft. SE of No. 14 and 330 ft. NE of S line of lease.
Moving in.
Houston Oil Co.'s No. 6 M. H. Ryals, 1,050 ft. from N line and center of E and W lines of lease.
Drlg. 1,675 ft. shale.
Humble O. & R. Co.'s No. 5 Fannie Heard, 1,490 ft. from S line, 450 ft. from W line of 337-ac. tract in Crunk Sur.
T.D. 4,380 ft.; W.O.C.
Humble O. & R. Co.'s No. 4 Fannie Heard, 1,216 ft. from E line, 466 ft. from N line of lease in Ximines Sur.
T.D. 5,775 ft.; P.B. to 4,404 ft.; drlg. shale 5,679 ft.
Humble O. & R. Co.'s No. 6 J. F. B. Heard.
T.D. 4,382 ft.; comp. 750 bbls. through ⅝-in. choke.
Humble O. & R. Co.'s No. 7 J. F. B. Heard, 1,107 ft. N and 466 ft. from W line of 500-ac. lease in Peoples Sur.
Drlg. plug 4,388 ft.
Humble O. & R. Co.'s No. 8 J. F. B. Heard, 933 f.. N of No. 6 and 933 ft. E of No. 3, in Peoples Sur.
Rigging up.
Stanolind O. & G. Co.'s No. 3-A J. M. O'Brien, Peoples Sur., begin at NE cor. of "A" lease, thence W along N line 1,509 ft.; thence S at right angles 466 ft.; S offset to No. 4-B.
S.D. 4,384 ft.
United Prod. Co.'s No. 15 Fox, 830 ft. W of No. 2-A in Wm. Hews and L. Brown Sur.
T.D. 5,831 ft.; W.O.C.
United Prod. Co.'s No. 14 W. J. Fox et al, 466 ft. from N line and 1,060 ft. W of No. 11 on 848-ac. tract in Wm. Hews and L. Brown Sur.
T.D. 6,002 ft.; temp. abd.
United Prod. Co.'s No. 7 Wilson Heard, 231 ft. S of No. 5.
Location.
United Prod. Co.'s No. 8 Lambert.
T.D. 4,382 ft.; prep. to complete.
United Prod. Co.'s No. 9 Lambert, 466 ft. S line and 507 ft. E line of Blk. 17, H.& D. Subd. of Hardwick Sur., Abst. 159.
T.D. 4,438 ft.; W.O.C.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 2 Mrs. A. Draeger, 1,200 ft. E of W line and 800 ft. N of S line of 205-ac. tract in J. F. Perry Sur.
Location.
Sun Oil Co.'s No. 9 Janner.
Rigging up.
Sun Oil Co.'s No. 3 Schermer, N. Clay Sur., 330 ft. NW, 330 ft. SW line of lease.
Coring 4,752 ft.
Sun Oil Co.'s No. 5 Schlettman.
T.D. 1,340 ft.; comp. 10 bbls. hr. through open tubing.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Brownie Babbette Oil Co.'s No. 1 R. A. Moore, 562 ft. W, 50 ft. S of NE cor. of E½ of SE Sec. 18-12s-12w.
Prep. to work over; T.D. 6,642 ft.
Shell Pet. Corp.'s No. 3 State.
T.D. 6,002 ft.; W.O.C.
Shell Pe.. Corp.'s No. 18 Watkins.
Building derrick.
Shell Pet. Corp.'s No. 19 Watkins fee, 1,240 ft. S. 2,185 ft. W of NE cor. Sec. 18-12-11.
Rigging up.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Humble O. & R. Co.'s No. 1 Joseph Berh located on 100-ac. tract lease in Sec. 21-8s-3e, about a mile and a half NW of the producer.
Location.
Shell Pet. Corp.'s No. 1 E. M. Ellaboutrout, in Sec. 22-8s-3e, 1½ miles due N of discovery well.
Location.
Standard Oil Co. of Kans.' No. 1 Joseph Mouton.
T.D. 1,395 ft.; W.O.C.
Superior Oil Co.'s No. 1 J. Sidney Arcenaux et al, 1,665 ft. N and 439 ft. W of SE cor. of Sec. 3-8s-3e.
T.D. sand 3,076 ft.; reaming.
Superior Oil Co.'s No. 1 U. T. Iseringhausen, 1,381 ft. E and 502 ft. S of NW cor. of Sec. 35-8s-2e.
T.D. 7,853 ft.; comp. 1,556 bbls. day 24/64-in. choke on tubing, 7/64-in. choke on casing; T.P. 2,090 lbs., C.P. 2,410 lbs.
Superior Oil Co.'s No. 1 Leo E. Kahan et al, 2,381 ft. N and 468 ft. W of SE cor. of Sec. 33-8s-2e.
T.D. 6,598 ft.; drlg. streaks sand and shale 6,092 ft.
Superior Oil Co.'s No. 1 Eliza Mire, 890 ft. S and 597 ft. W of NE cor. of Sec. 32-8s-3e.
T.D. 8,088 ft.; W.O.C.
Superior Oil Co.'s No. 1 Looanstie Richard, 2,878 ft. S and 465 ft. W of NE cor. of Sec. 34-8s-3e.
Coring sand and shale 7,800 ft.
Superior Oil Co.'s No. 1 Marcellus Savoie, 2,201 ft. S and 761 ft. W of NE cor. of Sec. 27-8s-3e.
Drlg. sand and shale 7,351 ft.

CAILLOU ISLAND—TERREBONNE PAR.

Texas Co.'s No. 12 State Caillou Island, 2,420 ft. E and 73 ft. S of NW cor. of Sec. 20-23s-20e.
Rigging up.
Texas Co.'s No. 13 State Caillou Island, 660 ft. SW of No. 11 well.
Drlg. sand 3,970 ft.; no report.

CALCASIEU LAKE—CAMERON PARISH

Texas Co.'s No. 10-A State, 16,855 ft. W and 3,270 ft. N of NE cor. Sec. 1-14s-9w in Twp. 13s-9w.
Drlg. shale 6,007 ft.

CAMERON MEADOWS—CAMERON PAR.

Burton-Sutton Oil Co.'s No. 4 School Land, 2,891 ft. W and 150 N of SE cor. of Sec. 16-4s-13w.
Derrick.
Humble O. & R. Co.'s No. 8 Cameron Meadows, 2,895 ft. W, 150 ft. S of NW cor. Sec. 21-14s-13w.
Drlg. shale 4,930 ft.
Humble O. & R. Co.'s No. 1-B Cameron Meadows, 250 ft. W and 2,640 ft. S of NE cor. of Sec. 24-14s-14w.
Drlg. shale 4,824 ft.
Texas Co.'s No. 1 Miami Corp.
Drlg. shale 4,792 ft.; no report.

CHOCTAW FIELD—IBERVILLE PARISH

Standard Oil Co. of Louisiana's No. 6 Myrtle Grove Wilbert, Sec. 52-9s-11e.
Drlg. shale 5,029 ft. (no report).

EDGERLY—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Hunter, 1,366 ft. N 425 ft. W of SE cor. SW Sec. 21-9s-11w.
Rigging up.

FOUR ISLAND—TERREBONNE PARISH

Texas Co.'s No. 6 State, Four Island.
Dredging canal.
Texas Co.'s No. 7 State, Four Island.
Dredging canal.

GARDEN ISLAND—PLAQUEMINES PAR.

Texas Co.'s No. 11 Garden Island, 4,191 ft. S and 1,504 ft. W of NE cor. Sec. 107-23s-32e.
Sidetracking 1,300 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 34-11s-1w.
T.D. 7,669 ft.; W.O.C.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 2 Hanszen, 400 ft. W and 200 ft. S of No. 1 in Sec. 14-12s-10w.
T.D. 6,462 ft.; standing.
H. E. Dawton's No. 1 Kaugh.
Derrick.
Gulf Prod. Co.'s No. 14-A Irwin, 300 ft. SE of No. 13-A.
T.D. 6,853 ft.; flowed 1 hr. and went dead. Washing.
Wilfred LaHay's No. 1 Roux, Sec. 36-12s-10w.
Shale 3,986 ft.; no report.
Sutton Oil Co.'s No. 1 Portier, 2,930 ft. W and 1,320 ft. N of SE cor. of Sec. 22-12s-10w.
Rigging up.
Texas Co.'s No. 12-B State, 500 ft. SE of No. 10-B or 1,360 ft. E and 149 ft. S of NE cor. of Sec. 13-12s-10w.
Derrick.

Union Sulphur Co.'s No. 1 Barbee est., 1,720 ft. N line, 320 ft. E of SW cor. Sec. 12-12s-10w.
T.D. 7,986 ft.; sidetracking 6,917 ft.
Union Sulphur Co.'s No. 9 Humble, 300 ft. E and slightly N of No. 1 well, or 320 ft. N and 270 ft. E of the SW cor. of Sec. 12-12s-10w.
T.D. 6,000 ft.; salt; S.D.
Yount Lee Oil Co.'s No. 11 Gulf Land, Sec. 14-12s-10w.
T.D. 7,044 ft.; sidetracked to 6,090 ft.; tested S.W.; pulling tubing.
Yount Lee Oil Co.'s No. 14 Gulf Land.
T.D. 5,413 ft.; salt; stuck drill stem.

NEW IBERIA—IBERIA PARISH

G. D. Spell's No. 1 Sad.ator, 25 ft. NW of No. 1 in A. B. Bernard Sur., Sec. 54.
Location.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Barnsdall Oil Co.'s No. 2 Caffal.
Drig. sandy lime 6,887 ft.
Barnsdall Oil Co.'s No. 6 Fontenot, 330 ft. from N and W lines of lease in Sec. 7-9s-6w.
Drig. sticky shale 6,058 ft.
Magnolia Pet. Co.'s No. 2 Gillison, 990 ft. W and 200 ft. N of SE cor. of lease in Sec. 12-9s-7w.
Drig. sandy shale 6,699 ft.
Magnolia Pet. Co.'s No. 7 Walt.
Drig. shale 6,033 ft.
Shell Pet. Corp.'s No. 2 Ardoin.
T.D. 7,337 ft.; P.B. to 7,020 ft.; W.O.C., 7,017 ft.
Shell Pet. Corp.'s No. 8 Fontenot, 330 ft. out of NE cor. of lease.
Cellar.
Shell Pet. Corp.'s No. 3 Heyd, 265 ft. N, 330 ft. W of SE cor. NE Sec. 13-9s-7w.
T.D. 5,530 ft.; comp. 498 bbls. ¼-in. choke, T.P. 250 lbs., C.P. 325 lbs.
Shell Pet. Corp.'s No. 8 Heyd.
Coring 6,976 ft.
Shell Pet. Corp.'s No. 9 Heyd, 998 ft. W and 330 ft. S of NE cor. of 320-ac. lease.
T.D. 6,893 ft.; comp. 605 bbls. 16/64-in. choke; T.P. 1,075 lbs., C.P. 1,200 lbs.
Shell Pet. Corp.'s No. 2 C. L. Johnson, 330 ft. out of SE cor. of 80-ac. lease, and off-set to Magnolia's No. 6 B. T. Wait.
Cellar.
Shell Pet. Corp.'s No. 1 Scott, 230 ft. out of NW cor. of lease.
Moving in.

JENNINGS—ACADIA PARISH

Yount Lee Oil Co.'s No. 14 Housierre-Latrielle, 260 ft. N of No. 13, Sec. 47-9s-2w.
Drig. gumbo 950 ft.; (no report).

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 10 L.L.&E., 4,543 ft. S, 503 ft. W of NW cor. Sec. 30-21s-20e.
T.D. 3,690 ft.; S.D.
Texas Co.'s No. 11 L.L.&E., Sec. 30-21s-20e.
Drig. lime 2,428 ft.
Texas Co.'s No. 24 Lake Barre.
Drig. shale 3,559 ft.
Texas Co.'s No. 28-D State Lake Barre, 300 ft. SW from No. 27 in Sec 40-21s-19w.
T.D. 3,654 ft.; comp. 1,440 bbls. day ½-in. choke.

LAKE PELTO—TERREBONNE PARISH

Texas Co.'s No. 11 Lake Pelto, 1,600 ft. SW of No. 5.
Drig. sand 4,105 ft.
White one O. & G. Co.'s No. 1 Buckley, 300 ft. S and E of NW cor. SW SW Sec. 35-19s-16e.
Drig. shale 2,180 ft.

LEEVILLE—LAFOURCHE PARISH

Emerald Pet. Corp.'s No. 4 State of Louisiana.
Rigging up.
Emerald Pet. Corp.'s No. 5 State of La., 1,878 ft. N of No. 1 well in Sec. 36-21s-22e.
Rigging up.
Emerald Pet. Corp.'s No. 7 State of La., 1,078 ft. N of No. 1.
Location.
Emerald Pet. Corp.'s No. 8 State of La., 455 ft. N of No. 1.
Derrick.
Emerald Pet. Corp.'s No. 9 State of La., 600 ft. S of No. 1.
Derrick.
Gulf Prod. Co.'s No. 1 Allen Land Co., 600 ft. N, 60 ft. W of W bank of Bayou La-Fourche in Sec. 26-21s-22e (W.O.).
T.D. 3,734 ft.; comp. 800 bbls. daily.
Frank L. Hill's No. 1 Bernard, 1,422 ft. N and 808 ft. E of SW cor. Sec. 26-21s-22e.
Drig. shale 2,900 ft.
Lincoln Oil Co.'s No. 1 Constantine.
Coring 4,019 ft.
Texas Co.'s No. 16 L.L.&E.
T.D. 4,525 ft.; abd.
Texas Co.'s No. 17 L.L.&E., 1,821 ft. S and 122 ft. E of NW cor. of Sec. 27-21s-22e.
Drig. hard sand 4,627 ft.
Texas Co.'s No. 19 L.L.&E., Sec. 27-21s-22e.
Drig. shale 637 ft.
Texas Co.'s No. 20 L.L.&E., Sec. 27-21s-22e.
Rigging up.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 12 Bordages, 966 ft. W and 93 ft. N of SE cor. N½ NE Sec. 8-10s-19w.
Derrick.
Magnolia Pet. Co.'s No. 26 Miller, 430 ft. S. 780 ft. E NW cor. SW¼ NW¼ Sec. 9.
T.D. 4,388 ft.; prep. to reset screen.
Magnolia Pet. Co.'s No. 34 Miller, Sec. 9-10s-9w.
Spud.
Union Sulphur Co.'s No. 1 Farquahar, 200 ft. S and W lines, NE cor. SW SE Sec. 36-12s-10w, 2-ac. tract.
T.D. 7,461 ft.; W.O.C.
Union Sulphur Co.'s No. 6 Moss, between No. 3 and No. 5.
Drig. hard shale 6,244 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Ref. Co.'s No. 6 Wilson-Cochran.
Sandy shale 3,002 ft.; S.D.
Texas Co.'s No. 17 Botney Bay, 1,800 ft. S. 8 deg. W, 600 ft. N 82 deg. west southern NE 560 deg. tract, Sec. 4-6s-5e.
Sand 3,332 ft.; comp. 1,930 bbls. day ⅝-in. choke.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 26 United Land.
Drig. shale 4,615 ft.

STARKS—CALCASIEU PARISH

Gulf Ref. Co.'s No. 35 Lutcher Moore, Sec. 19-9s-8w.
Drig. sticky shale 3,573 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 776 fee.
Coring 4,603 ft.
Union Sulphur Co.'s No. 788 fee, 602 ft. S 1,209 ft. W of C Sec. 29-9s-10w.
T.D. 6,103 ft.; drig. hard sand 4,996 ft.
Union Sulphur Co.'s No. 794 fee.
T.D. 5,087 ft.; washing.
Union Sulphur Co.'s No. 795 fee.
Location.
Union Sulphur Co.'s No. 796 fee.
T.D. 2,144 ft.; prep. to pump.
Union Sulphur Co.'s No. 797 fee, 1,652 ft. W, 418 ft. N of C of Sec. 29-9s-10w.
Drig. 2,475 ft.
Union Sulphur Co.'s No. 798 fee, 673 ft. N, 575 ft. W of C Sec. 29-9s-10w.
Drig. 2,242 ft.
Union Sulphur Co.'s No. 799 fee.
T.D. 2,996 ft.; prep. to bring in.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 12 Yount Lee fee, 800 ft. S of No. 11, in line with Nos. 9 and 10. Sec. 12-13-3w.
T.D. 7,439 ft.; prep. to start up.

VINTON—CALCASIEU PARISH

Gulf Ref. Co.'s No. 9 Gardner, 572 ft. E and 159 ft. N from SW cor. of SW SE Sec. 33-10s-12w.
Moving in to work over.
Gulf Ref. Co.'s No. 72 G. N. G., 643 ft. E, 50 ft. S, NW cor. NE SE Sec. 33-10s-12w.
T.D. 3,170 ft. sand; W.O.C.
Tri-Oil Co.'s No. 1 Matilda Gray, 38 ft. W, 35 ft. N of SE cor. NE SW NE Sec. 33-9s-12w.
T.D. 3,535 ft.; prep to deepen.
Wilson Broach's No. 5 Wilson.
T.D. 3,345 ft.; prep. to make drillstem test.
Wilson Broach Co.'s No. 11 Wilson Strip (workover).
Sand 3,557 ft.; S.D. orders.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 9 Wilburn.
Derrick.

MISCELLANEOUS WILDCATS

TEXAS

ANGELINA COUNTY

Thayer et al's No. 1 Dearmond, J. T. Peavy Sur., 2½ miles SE of Zavalla.
Hard lime 1,915 ft.; T.D.; F.A.

AUSTIN COUNTY

I.T.I.O. and Johnson Bros.' No. 1 August Wrangler, 450 ft. out of N cor. of Wrangler 132-ac. tract in Adam Kuykendall Sur.
Location.

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bachelder Sur.
Drig. 3,822 ft.
C. & R. Dev. Co.'s No. 1 National Life Co., 340 ft. from W line and 340 ft. from N line of 100-ac. tract out of west end Nos. 3 and 4 in Henry Austin League No. 4, Abst. No. 12.
Rigged up; S.D.
Jack Clark tr.'s No. 1 J. M. Spear, 150 ft. from N line and 150 ft. from W line of Lot 4, in Pinckney Sur.
T.D. 2,770 ft.; S.D.
Danciger O. & R. Co.'s No. 4-A Hunt, skidded 200 ft. SW of No. 3-A in W. C. Carson Sur.
Location.
Danciger O. & R. Co.'s No. 3-A Hunt, 2,100 ft. from E, 2,000 ft. from S lines of Hunt's 1,000-ac. tract in W. C. Carson Sur.
T.D. 6,797 ft.; P.B. 1,172 ft.; junked, abd.
Danciger Oil & Ref. Co.'s No. 1 Stark-Brown 330 ft. out of most easterly NE cor. of lease in Perry & Austin Sur.
Drig. shale 5,610 ft.
Gillock Pet. Co.'s No. 1 Frank Trukss, 200 ft. from S and 1,000 ft. from E lines of 75-ac. tract, Sec. 7, H.T.&B.R.R. Sur.
Derrick.
Holt et al's No. 1 Griffith, J. B. Bailey Sur.
T.D. 4,250 ft.; waiting orders.

BRAZOS COUNTY

M. S. Broach's No. 1 Buck Wallace, 1,000 ft. from S line, 400 ft. from W line of 251-ac. tract in G. W. Singleton Sur.
S.D. 410 ft.
H. Elliott et al's No. 1 W. F. Odom, near center of 379-ac. tract in SW cor. of Isaack Curll Sur.
Cmtd. surface csg. 30 ft.
F. H. Scott's No. 1 Klintworth, I. Curd Sur., 300 ft. from N line, 400 ft. from E line.
T.D. 2,500 ft.; S.D.
D. W. Young, Jr.'s (H. L. Bleam) No. 1 Harrison, 300 ft. from S and W lines of lease in J. D. Allcorne Sur.
Spudded and S.D.

BURLESON COUNTY

Southern Seaboard Co.'s No. 1 J. H. Coulter, 9,400 ft. from SW line and 2,200 ft. from NW line of 1,176-ac. tract in SE cor. of county in A. Kennon Sur.
Derrick.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat. Realty Co., C of NE of Sec. 6, Blk. C.
Drig. shale 5,381 ft.
Herman Heep's No. 3 Welder.
Location.
Herman Heep Oil Co.'s No. 1-B F. Welder.
Drig. 5,655 ft.
J. H. Meek et al's No. 1 R. Adamans, C of NW line of Sec. 45, 2½ miles NE of McCamey.
Spud.

CHAMBERS COUNTY

John H. Carreker's No. 1 B. Weaver, 404 ft. out of SE cor. of lease in A. Weaver Sur.
T.D. 2,550 ft.; tearing down rig.
Turnbull & Irwin's No. 1 Sudindorf, center of W line of 482-ac. tract, H.&T.C. Sur. No. 67, due E of Analuac.
Rigging up.

COLORADO COUNTY

Coyle-Concord Oil Co.'s No. 1 Nelson, 3,200 ft. SE of NW cor. of Sec., 2,200 ft. SW at right angles in I.&G.N. Sur.
T.D. 4,052 ft.; R.U. and S.D.
Quintana Pet. Co.'s No. 1 M. A. Olmstead, 457 ft. N 66 deg. 20 ft. E along S line from SW cor. of 129-ac. tract and 425 ft. NW at right angles in M. Baton Sur.
Rigging up.
Union Central Oil Co.'s No. 1 Mann, 620 ft. from W line and 330 ft. from N line of 20-ac. tract in J. L. Dugat Sur.
Location.

FAYETTE COUNTY

Colorado Oil Co.'s No. 1 Anders.
T.D. 2,820 ft.; S.D.

FORT BEND COUNTY

Gem Oil Co.'s No. 1 Farmer, 330 ft. out of NE cor. of Robt. Hodges Sur., on 200-ac. tract.
Drig. sticky shale 3,021 ft.
Mills Bennet.'s No. 1 Luschner, 3,720 ft. from N line of survey and 550 ft. from W line of lease in T. Habermachner Sur.
T.D. 4,492 ft.; W.O.C.
Joe Moffat's No. 1 Blakly, 100 ft. from N and W lines of Lot 4, Blk. C.
T.D. 517 ft.; S.D.
J. E. Seiber's No. 1 J. B. Farmer, 150 ft. out of most southerly cor. of 50-ac. tract in Jas. Scott Sur.
Drig. sand and shale 3,897 ft.
W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur.
Rigging up.
Vico Oil Co.'s No. 1 H. R. Darst, 5,690 ft. N of S line and 685 ft. W of E line of E. Powell Sur.
Derrick.
Wilks et al's No. 1 Norris, 300 ft. W and 1,352 ft. S of N cor. of 525-ac. tract (5 miles S of Needville).
Rigged up and S.D.

GALVESTON COUNTY

George K. Spoor's No. 1 Maco Stewart, 1,626 ft. N of SE cor. of Alex Farmer Sur., and 1,175 ft. E in W. K. Wilson Sur. (4 miles S of Dickinson).
T.D. 6,577 ft.; reinforcing derrick; S.D.
Humble O. & R. Co.'s No. 1 Maco Stewart, C of E and W lines of 400-ac. tract in John Sellars Sur., S. of Dickinson Bayou. 3 miles N of Spoor well.
Drig. shale 5,523 ft.

GRIMES COUNTY

Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1).
T.D. 880 ft.; S.D.
W. D. Roan et al's No. 1 D. C. Kelly, 1,532 ft. from N line and 168 ft. from E line of U. Sanders Sur., near Carlos.
Rigged up and S.D.
J. H. Woodward et al's No. 1 O. A. Hamilton, center of Hamilton 95.5-ac. tract S of Richards in the O. Hill Sur.
Rigging up.

HARDIN COUNTY

Wilcox O. & G. Co.'s No. 1 Sternberger, 1,328 ft. N of S line and 1,311 ft. W of E line of C. Dorsey Sur. No. 1.
T.D. 4,360 ft.; S.D.

HARRIS COUNTY

Emerald Pet. Co.'s No. 1 Griffith.
Drig. 4,156 ft.
C. C. Foster and others' No. 1 H. K. Johnson, 2,000 ft. from S line and center of E and W lines of G.C.&S.F. Sur.
Spud and drig. water well.
General Crude Oil Co.'s No. 1 Rorick est., 5,606 ft. S of N line of survey and 1,546 ft. W of E line of 1,426-ac. tract in John C. Ogburn Sur.
Drig. shale and lime 1,690 ft.
H. H. Givans' No. 1 F. B. Bender, 2,640 ft. from S line and 4,860 ft. from E line of Geo. Fisher Sur.
S.D. at 335 ft.
Imperator O.l Co.'s No. 1 Brooks est., 7,400 ft. S and W of NE cor. of R. & R. Vince Sur.
Rigging up and S.D.
Loring Oil Co.'s No. 1 Westmoreland, Lot 2, Blk. 33, Westmoreland Add.
Drig. gray lime 5,410 ft.
W. U. Paul's No. 1 E. M. House, 2,200 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur.
Set 10-in. at 1,000 ft.; S.D.
Southland Oil Co.'s No. 1 Galvey, SE cor. Sec. 4, Blk. 1, E.&T.C. Sur.
T.D. 1,261 ft.; W.O.C.

JACKSON COUNTY

Encio Gas Co.'s No. 1 J. H. Drummond, 330 ft. out of most easterly NE cor. of Drummond 499-ac. tract.
Set surface csg. 1,150 ft.
Encio Gas Co.'s No. 1 Seidel & Simmons, 150 ft. from SW line or 300 ft. NE at right angles from No. 1 Toney, in Raymond Musquiz Sur.
T.D. 5,581 ft.; tested S.W.; P.B. to 5,250 ft.; waiting orders.
Imperator Oil Co.'s No. 1 Dutton, S center of Lot No. 11, Blk. 25, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Muskins Sur.
Rigging up.
Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50 acres of Miller 100-ac. tract in Ray Musquiz Sur.
Location.

JEFFERSON COUNTY

Gulf Prod. Co.'s No. 3 I. W. Junker, 700 ft. W, 350 ft. S of NE cor. of 260-ac. tract in W. H. Smith League.
Drig. water sand 3,616 ft.
Magnolia Pet. Co.'s No. 1 E. Herbert Trust, 990 ft. N, 330 ft. E of SW cor. of P. H. Bell Sur. No. 2.
Location.
Sun Oil Co.'s No. 1 H. Long, 1,500 ft. N line, 990 ft. E line of lease.
T.D. 7,138 ft.; reaming 7,010 ft.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4.
Location.
Extension Oil Co.'s No. 1 J. A. Lovett, 200 ft. from E and 600 ft. from S line of lease, P. P. Deevers Sur.
Coring sand 2,728 ft.
Gulf Prod. Co.'s No. 2 Kirby, John Pleasant Sur., 1,866 ft. S of No. 1.
Comp. 125 bbls. net oil daily.
Gulf Prod. Co.'s No. 4-C Kirby, 1,700 ft. due W of No. 1 discovery well in John Pleasant Sur.
T.D. 5,861 ft.; comp. 700 bbls. net oil day.
Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 3,550 varas from E line and 600 varas from N line of Samuel Strong Sur.
Drig. shale and lime 1,970 ft.
A. L. Maxwell's No. 1 M. D. Hinchliff, 300 ft. from E line and 1,000 ft. from N line of H.&T.C. Sur. No. 150.
Location.
Thomas et al's No. 1-A Eicke, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur.
T.D. 5,058 ft.; D.S. test 5,025 ft., ¼-in. choke, 5 min., 8 thribbles mud; S.D. orders.

MATAGORDA COUNTY

Continental Oil Co.'s No. 1 Robbins.
Drig. 4,977 ft.
Dr. Griffith's No. 1 fee, 2,000 ft. from N line and 3,000 ft. from W line of Wm. E. Bell Sur.
Rigged up and drig. water well.
United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease.
T.D. 7,880 ft.; cementing.
United North & South Dev. Co.'s No. 1 Unit No. 58, 250 ft. N and 200 ft. W of SE cor. of Unit No. 58.
Rigging up.

MONTGOMERY COUNTY

Baker et al's No. 1 Benker, D. James Sur. Whipstocked and drilled to 4,750 ft.; D.S. test in 10 min.; built up 50 lbs. pressure and showed 1 joint oil and mud and 30 thribbles S.W.; old T.D. 4,921 ft.; P.B. 4,805 ft.; W.O.C.
Brown & Wheeler et al's No. 1 Jones, 440 ft. out of NW cor. of S 175 acres of 350-ac. tract.
Location.
Deering & Frazier's No. 1 L. Hicks, T. Taylor Sur., 660 ft. S and W of NE cor. of 565-ac. tract.
T.D. 5,603 ft.; abd.
Humble O. & R. Co.'s No. 1 Anna M. Platte, 466 ft. S and 1,100 ft. W of NE cor. of 100-ac. tract in Wm. Barker Sur.
Rigging up.
Sayre Oil Co.'s No. 1 Delta Land & Lbr. Co., 330 ft. out of NE cor. of J. Truitt Sur.
Location.
Shell Pet. Corp.'s No. 1 Crighton, 1,480 ft. W and 290 ft. S of NE cor. of lease in Mary Corner Sur.
Derrick.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract.
Drig. shale 1,800 ft.
Texas Louisiana Oil Co.'s No. 1 Starks, 2,450 ft. N of NW cor. M. Delano Sur. 68, 10,500 ft. E at R/A.
T.D. 5,055 ft.; S.D.

POLK COUNTY

Howard Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 1½ mile NE of Corrigan.
Spud and S.D.

REFUGIO COUNTY

Cox et al's No. 1 F. W. Bissett, J. Crockett Sur.
T.D. 5,775 ft.; no report.
Heard-Holland Oil Co.'s No. 1 Peck, 366 ft. N and W out of NW and SW of Bonnie View Subd.
T.D. 5,351 ft.; D.S. test 5,330-37 ft., 11 mins., 400 lbs. pressure, ¼-in. choke top and 5/16-in choke on bottom; D.S. test 5,337-51 ft. showed 220 lbs. pressure 11 mins., and 100 ft. mud cut with gasoline and some fresh w.r.; prep. to set 7⅝-in. csg. at 5,320 ft.
G. Jeffries' No. 1 James F. Power, 759 ft. from N and 1,812 ft. from E lines of 500-ac. lease in J.J. Garza and J. Vidaurri Sur.
T.D. 4,523 ft.; washing.
Neasal-Baymore's No. 2 E. Heard, Ximines Sur.
T.D. 6,100 ft.; S.D.
Quintana's No. 1 Thos. O'Connor, 8 miles NE of town of Refugio and 3 miles SE of Greta Field.
T.D. 5,575 ft.; S.I.M. sand 5,569-75 ft.; on 5-hr. test showed an average of 546 bbls. per day; ¼-in. choke; 400 lbs. tubing pressure; 850 lbs. csg. pressure; comp. 36 bbls. hr. ⅝-in. choke; T.P. 425 lbs., C.P. 800 lbs.
Quintana Oil Co.'s No. 1-B O'Connor, B.B.&B. Sur.
Rigging up.
Quintana Oil Co.'s No. 2-A O'Connor, 450 ft. N and 450 ft. W of No. 1.
Location.

SAN AUGUSTINE COUNTY

Fidelity Exploration Co.'s No. 1 Bryan & Flourney, 1,926 ft. from N and 725 ft. from E lines of Sec. 14, S.P.R.R. Sur.
T.D. 2,005 ft.; S.D.; moving in heavy rig to drill to Woodbine.

SAN JACINTO COUNTY

Darby Jones' No. 1 McBee.
T.D. 2,985 ft.; S.D.
Phillips Pet. Co.'s No. 1 Foster Lbr. Co., 330 ft. out of NE cor. of Geo. Taylor Sur.
T.D. 4,513 ft.; abd.
Turnbull & Irwin's No. 1 Peoples State Bank, 1,360 ft. E of SW cor. of Peoples State Bank fee in L. D. Martinez Sur.
T.D. 4,651 ft.; abd.

TRINITY COUNTY

Tom Smith et al's No. 1 Oliver Moody, 1,252 ft. from S line, 500 ft. from E line of 50-ac. tract in E. Roberts Sur. Location.

TYLER COUNTY

Boone-Wallace & Lane's No. 1 Cruse. T.D. 3,108 ft.; S.D.

VICTORIA COUNTY

John F. Camp's No. 1 Zimmer, 330 ft. from SE and NE lines of SW of 58.5-ac. tract of Zimmer 117-ac. lease in R. Manchola Sur. Drlg. 480 ft.

Feltex et al's No. 1 Herman Dietzel, 180 ft. from NW line and 330 ft. from SW line of 80-ac. tract in Manchola Sur. Rigging up.

Gulf Prod. Co.'s No. 6 Keeran, begin at intersection of R.R. and SW line of survey, thence NE along R.R. 6,257 ft., thence NW at r/a 2,539 ft. in the M. DeLeon Sur. Drlg. gray shale 4,165 ft.

Humble O. & R. Co.'s No. 1 McFadden est., 2,000 ft. S. 15 deg. W of Lion O. & R. Co.'s No. 1 McFadden in C. O. Edwards Sur. Drlg. shale 2,415 ft.

Humble O. & R. Co.'s No. 2 Mitchell, 6,500 ft. NW line, 7,000 ft. from SW line of Mitchell 5,000-ac. tract. Plts.

Humble's No. 1 Agnes Murphy, begin NE cor. of survey, thence SW along SE line 33,900 ft., thence NW 3,600 ft. at r/a in C. De LaGarza Sur., Abst. 46. T.D. 4,212 ft.; abd.

Nutex Oil Co.'s No. 1 Zimmer, 330 ft. out of SW cor. of E½ of John Zimmer 120-ac. tract. Drlg. 1,250 ft.

Quintana Oil Co.'s No. 1 McCormic, 500 ft. SW line, 500 ft. NW line of survey in most westerly NW cor. S.A.&M.G. Sur. No. 3. T.D. 2,876 ft.; S.D.

Texas Co.'s No. 2 McFaddin, 9,150 ft. S and 200 ft. E at right angles out of NW cor. of C. M. B. Hoyt Sur. Drlg. sand and shale 3,778 ft.

WALLER COUNTY

L. W. Capps and C. J. Sloan's No. 1 Vaughn, 1,200 ft. N of Kirby's No. 1 Vaughn, J. MacFarland Sur. No. 46. T.D. 2,924 ft.; abd.

WHARTON COUNTY

Pure Oil Co.'s No. 2 Chas. T. Kountze, 2,310 ft. at R/A from NW line and 990 ft. at R/A from SW line of 280-ac. tract in Morris & Cummings Sur., No. 19. Drlg. 3,647 ft.

Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 160 acres. T.D. 8,236 ft.; washing.

SOUTH LOUISIANA

ACADIA PARISH

Edwards Drlg. Co.'s No. 1 Daigle, NE cor. of SE of Sec. 24-7s-1e. Coring lime and shale 6,420 ft.

Rhodes Drlg. Co.'s No. 1 Lattrell. S.D. 2,280 ft.

AVOYELLES PARISH

Hass & Stokes' No. 1 Hass, from NE cor. SE Sec. 28 go along E line of Sec. 28 2,486 ft. to point on highway; thence 84 deg. E on highway for 386 ft., thence N 87 deg. E for 4,426 ft., then N 45 deg. E 226 ft. Rigging up and S.D.

BEAUREGARD PARISH

Federal Pet. Co.'s No. 1 Lutcher-Moore, 467 ft. S and 467 ft. E of the NW cor. of Sec. 4-6-12. Drlg. 8,016 ft.

Federal Pet. Co.'s No. 1-B Lutcher-Moore, 6 miles NW of No. 1 Lutcher-Moore and near Fields. Drlg. 630 ft.

F. W. Martin's No. 1 J. E. Cochran, SE cor. of NE of Sec. 34-4s-12w (W part of county and 6 miles S of Merryville). T.D. 6,268 ft.; S.D. for fuel.

CALCASIEU PARISH

Fred Oil Co.'s No. 1 Faizst, 566 ft. N, 300 ft. W of SE cor. of NW of SE Sec. 26-8s-10w. T.D. 3,005 ft.; S.D.

Steinberger Pet. Co.'s No. 1 Drew, 330 ft. out of NW cor. of NE¼ of Sec. 26-10s-11w, 6½ miles SW of Sulphur. Location.

Union Sulphur Co.'s No. 2 Barbe, 279 ft. S and 350 ft. W of NE cor. of SE of Sec. 11-9s-3w. Drlg. shale 6,658 ft.

CAMERON PARISH

Southern Sulphur Oil Corp.'s No. 1 Gulf of Mexico, near the mouth of the Calcasieu River. Drlg. gumbo 3,230 ft.; no report.

IBERIA PARISH

Diamond Corp.'s No. 1 Edmond Victor, 1,908 ft. E and 450 ft. from SW cor. of Sec. 41-12s-5e. Derrick.

Y. D. Spell's No. 1 Bernard, 5,138 ft. SW cor. along western boundary line, then in NE direction 1,140 ft. along N line of Bernard land, 53 ft. S of well in Sec. 54-12s-7e. T.D. 3,826 ft.; comp. 720 bbls. day ⅝-in. choke.

IBERVILLE PARISH

Gross Pet.'s No. 1 Angelloz. T.D. 2,270 ft.; W.O.C.

JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 3 Devilbiss, 1,399 ft. W, 466 ft. S of NE cor. Sec. 14-9s-4w. Drlg. shale 5,403 ft.

Humble O. & R. Co.'s No. 1 Martin Kratzer, 400 ft. out of SE cor. 120-ac. tract, Sec. 14-9s-4w. Drlg. sand and gravel 907 ft.

Shell Pet. Corp.'s No. 1 Jernigan, 330 ft. E, 660 ft. S. NW cor. Sec. 12-9s-4w. Drlg. 6,144 ft.

Tide Water Oil Co.'s No. 1 Mrs. A. Bourgeois, 250 ft. E and 205 ft. S of C of Sec. 28-9s-5w. Drlg. shale 5,520 ft.

LAFOURCHE PARISH

Barnsdall Oil Co.'s No. 2 Harang Plantation, T.D. 7,216 ft.; S.D.

R. L. Gay, trustee's No. 1 Godchaux, 3,920 ft. N and 1,746 ft. E in common cor. of Lots 34 and 26, Twp. 15s-19e. Drlg. shale 4,610 ft.

Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 800 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e. Spudded and S.D.

PLAQUEMINES PARISH

Southern Sulphur Co.'s No. 1 Bay Adams, 2,325 ft. W and 526 ft. S of NE cor. of Sec. 23-20s-28e. T.D. 725 ft.; S.D.

Venice Corp.'s No. 1 Burras. Coring shale 1,058 ft.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 836 ft. N, 2,193 ft. W of SE cor. Sec. 135-14s-14e. Location.

Joe Danciger's No. 1 Delacroix Land Fur. Co., 2,442 ft. W and 660 ft. N of SE cor. of Sec. 127-14s-14e. Rigging up.

Southern Sulphur Oil Co.'s No. 1 State-Lake Borgue, 350 ft. N and 230 ft. E of SE cor. of Sec. 33-12s-15e. Drlg. sand and shale 2,722 ft.; (no report).

Southern Sulphur Corp.'s No. 1 Lake Lery, 400 ft. W, 500 ft. N, SW cor. Sec. 28-13s-15e. Shale 2,751 ft.; no report.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec. 29-5s-6e (workover). T.D. 5,017 ft.; S.D.

ST. MARTIN PARISH

Texas Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec. 17-8s-7. Drlg. shale 7,390 ft.

ST. MARYS PARISH

Black et al and Edwards Drlg. Co.'s No. 1 Chetimancha, Sec. 34-13s-9e, 219-ac. tract approximately 500 ft. at right angles SE and SW lines of tract. T.D. 6,501 ft.; S.D.

TERREBONNE PARISH

Texas Co.'s No. 1-B State-Bay Junop, 2,200 ft. N., 950 ft. E of SW cor. Sec. 27-21s-14e. T.D. 7,375 ft.; prep. to abd.

Texas Co.'s No. 3 School Board, 2,630 ft. S and 1,384 ft. E of NW cor. of Sec. 16-22s-15w. Rigging up.

VERMILLION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line, NE cor. Sec. 32-11s-3e. Rigging up.

VERNON PARISH

Anderson & Kerr Drlg. Co.'s No. 1 Nona Mills, 330 ft. S and W of NE cor. of Sec. 25-2n-9w. Drlg. shale 3,320 ft.

Robt. K. Williams Jr.,'s No. 1 Llano Del Rio, 1,185 ft. S, 1,000 ft. W of NE cor. Sec. 7-1n-9w. Rigged up and S.D.

La.-Ark. Wildcats

(Continued from Page 48)

Kincaid & Kelly's No. 1 Ober, 315 ft. N, 257 ft. W. SE cor. NW SE Sec. 5-14-10. Coring 1,875 ft.

A. D. Mytiler's No. 1 La. Delta Pecan Co., 1,700 ft. N, 180 ft. E, SW cor. Sec. 27-13-11. S.D. 857 ft.

Oynett et al's No. 1 Thomas, 330 ft. S and E, C Sec. 34-13-8. S.D. for fuel 740 ft.

W. K. Williams' No. 1 DeMoss Est., 900 ft. S. 330 ft. W, NE cor. Sec. 33-13-11. Set 10-in. 102 ft.; drlg. 1,800 ft.

SABINE PARISH

J. F. Anderson's No. 1 Burkett, 135 ft. N, 655 ft. E, SW cor. NW Sec. 10-9-13. W.O.S.R. 1,993 ft.

R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW Sec. 35-10-12. W.O. csg. 1,536 ft.

G. H. Collins' No. 1 Bellieu & Carter, 320 ft. S and W, NE cor. NW SW Sec. 21-9-13. Testing 2,002 ft.

Florence Oil Co.'s No. 1 McDonald, 330 ft. S and E, C Sec. 16-9-13 Comp. pumping 30 bbls. 1,993 ft.

De Generes et al's No. 3 Crawford, 330 ft. N and E, SW cor. NW NE Sec. 20-9-13. Tested S.O.; S.D. 1,490 ft.

Graham & Dalton's No. 1 Burkett, 330 ft. N and W of C Sec. 16-9-13. Set 6-in. 1,491 ft.; testing 1,520.

Earl P. Halliburton's No. 1 Paul, 330 ft. S and E, NW cor. SW SW Sec. 21-9-13. Testing 2,070 ft.

Helena O. & G. Co.'s No. 6 Burkett, 330 ft. S and E, NW cor. NE Sec. 10-9-13. Tested dry 1,959 ft.

Lamson-Leavell & Bryant's No. 1 Bank of Pleasant Hill, Sec. 29-9-13. Comp. pumping 20 bbls. 2,000 ft.

Zan Lloyd's No. 1 Henderson, 330 ft. N and W, C Sec. 29-9-13. W.O.S.R. 2,031 ft.

Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 18-9-12. Set 10-in. 40 ft.

Geo. L. Pace's No. 2 DeSoto Corp., 1,080 ft. S. 990 ft. W. NE cor. SE Sec. 27-10-13. Drlg. 3,345 ft.

L. L. Posey's No. 3 Burkett, 330 ft. S and E, NW cor. NE NW Sec. 10-9-13. W.O.S.R. 1,984 ft.

W. H. Rowe et al's No. 1 Craig, 330 ft. S and E of C Sec. 22-9-13. S.D. 1,200 ft.

J. A. Stinson's No. 1 Whitney Corp., 330 ft. S and W, NE cor. Sec. 8-9-13. W.O.S.R. 2,014 ft.

Stumpff & McFall's No. 1 Paul estate, Sec. 10-9-13. Tested S.W.; S.O. 1,976 ft.

Valley-Osage Oil Co.'s No. 1 Burkett, 330 ft. S and W NE cor. SW NE Sec. 10-9-13. Drlg. 25 ft.

RAPIDES PARISH

Ben Banner's No. 1 Bentley Lbr. Co., 2,640 ft. E. NW cor. Sec. 11-4n-5w. S.D. for wtr. 2,296 ft.

Evans & Collingsworth's No. 1 Hickman, 330 ft. S and E, NW cor. Sec. 40-4-1e. S.D. 2,130 ft.

C. D. Noe, Trustee's No. 1 Baird Est., SE cor. Sec. 40-5n-1w. Rigging up.

VERNON PARISH

Anderson & Kerr Drlg. Co.'s No. 1 Nona Mills, 330 ft. S and W, NE cor. NW SE Sec. 25-2n-9w. Dry and abd. 4,094 ft.

WEBSTER PARISH

Abney Oil Corp.'s No. 3 Slack, 660 ft. N, 575 ft. W. SE cor. NE SE Sec. 36-23-11. Drlg. 75 ft.

M. J. Kisslck's Trus. No. 1 Slack, 477 ft. S 325 ft. E NW cor. SW NW Sec. 18-23-10. Set 10-in. csg. at 270 ft.

WINN PARISH

Red River Ref. Co.'s No. 1 Tremont Lbr. Co., 150 ft. N and W, SE cor. NE NE Sec. 25-11-1w. Coring 1,357 ft.

ARKANSAS

COLUMBIA COUNTY

O. F. Whittaker's No. 1 Hall, C SE NE Sec. 10-15-20. W.O.S.R. 2,156 ft.

CONWAY COUNTY

Sou. Union Gas Co.'s No. 1 Feldman, C SW SW Sec. 6-5n-17w. S.D. 3,100 ft.

HEMPSTEAD COUNTY

Ark. Drlg. Co.'s No. 1 Jones, 1,000 ft. S, 600 ft. W. NE SE Sec. 11-14-24. Drlg 150 ft.

E. A. Austin's No. 1 McWilliams, 300 ft. N and W of SE cor. NW SW Sec. 19-13-23. Set 10-in. csg. at 140 ft.

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26 S.D. 1,992 ft.

LAFAYETTE COUNTY

Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23. Coring 2,240 ft.

Earl F. Fox's No. 1 Coleman Bros., 330 ft. N and W, SE cor. NW NE Sec. 36-16-25. Rigging up.

C. V. Lens' No. 1 Foster, 330 ft. S, 150 ft. E, C Sec. 9-15-25. Dry and abd. 3,242 ft.

LEE COUNTY

Ark.-La. P. L. Co.'s No. 1 McDonald, 1,500 ft. N, 370 ft. E, SW cor. Sec. 28-1n-4e. Drlg 2,730 ft.

MILLER COUNTY

Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27. S.D. 3,177 ft.

King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 34-14-28. S.D. 2,000 ft.

W. F. Lacey's No. 1 Gibson, 330 ft. S and E. NW cor. SW NW Sec. 30-19-27. S.D. 3,348 ft.

Magnolia Pet. Co.'s No. 3 Olivet, 350 ft. S, 160 ft. E, NW cor. NE NE Sec. 4-16-26. S.W. and abd. 2,959 ft.

C. E. Murdock's No. 2 E. L. Beck, 330 ft. N and W, SE cor. Sec. 33-15-26. W.O.S.R. 2,923 ft.

Oil Well Oil Corp.'s No. 1 Dodd, 300 ft. S, 200 ft. E. NW cor. SW NE Sec. 10-19-28. S.D. 52 ft.

Texarkana Oil Corp.'s No. 3 E. H. Beck, 330 ft. S and W NE cor. SE SE Sec. 33-15-26. Rigging up.

Lee Timberlake et al's No. 1 E. L. Beck, 150 ft. N and E, SW cor. NW SE Sec. 33-15-26. Coring red beds 2,922 ft.

John Wrather's No. 1 Olivet, 309 ft. S, 150 ft. E, NW cor. NE. W.O.S.R. 2,937 ft.

John Wrather's No. 1 Beck, SW cor. SW SE Section 34-15-26. Rigging up.

E. L. Young, tr.'s No. 1 Patterson, SE cor. SE NE Sec. 5-19-28. Csg. collapsed 2,406 ft.; T.D. 3,655 ft.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16. Drlg. 1,701 ft.

L. L. McDonald's No. 1 Arnold & Doyle, 150 ft. N and W, SE cor. NE SW Sec. 23-15-16. W.O.S.R. 2,131 ft.

J. D. Reynolds' No. 1 Guttry, 462 ft. S, 150 ft. W, NE cor. NE SW Sec. 21-15-19. W.O.S.R. 1,506 ft.

UNION COUNTY

Alexander-Head Oil Co.'s No. 1 Union Saw Mill Co., 330 ft. S and E, NW cor. SW SW Sec. 28-19-13. Set 10-in. csg. 160 ft.; S.D. 500 ft.

Bellevue Corp.'s No. 1 Greening, 1,650 ft. E. 330 ft. N, SW cor. SE SW Sec. 30-18-15. SW. and abd. 3,010 ft.

Mrs. R. K. Jones et al's No. 1 J. Davis, 330 ft. N and W, SE cor. NW NW Sec. 25-16-14. Arrng. to test 2,764 ft.

McCreslenn Oil Co.'s No. 1 Union Saw Mill Co., 330 ft. N and W, SE cor. NE NW Sec. 3-18-13. Drlg. 260 ft.

Marine Oil Co.'s No. 2-B Union Saw Mill Co., 330 ft. N and E, SW cor. SW NW. Drlg. red beds 3,300 ft.

Tubal Pet. Co.'s No. 1 Gaddy, 340 ft. N and E, SW cor. SE NW Sec. 14-17-14. S.D.; W.O. 3,416 ft.

MISSISSIPPI

AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e. S.D. 550 ft.

GREENE COUNTY

United Gas Public Service Co.'s No. 1 Davis, C NW Sec. 30-1n-5w. Drlg. 7,210 ft.

ISSAQUENA COUNTY

Pelican Oil & Gasoline Co.'s No. 1 Steel Bayou Corp., 400 ft. N, 350 ft. E, SW cor. NW Sec. 14-12n-3w. Drlg. 2,880 ft.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 520 ft. W, 200 ft. S, C Sec. 24-7n-13w. Drlg. 1,420 ft.

SIMPSON COUNTY

Berry Corp.'s No. 2 R. T. Berry, Sec. 33-2n-4e. Set 7-in. 2,048 ft.

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-3w. Reaming 560 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 24-3n-9e. Moving in rig.

WARREN COUNTY

Orbet Drlg. Co.'s No. 1 R. L. Parker, 300 ft. E, CWL Sec. 14-14-1e. S.D. 3,169 ft.

La.-Ark. Proven Fields

NORTH LOUISIANA

CADDO—BLANCHARD

Producers and Pyramid O. & G. Co.'s No. 1 Hammock, 150 ft. S, 1,525 ft. W, NE cor. SE SW Sec. 3-18-16. Comp. 3,000,000 ft. gas 906 ft.

Pyramid-Babare's No. 1 Hearne, 660 ft. N and E. SW cor. SE Sec. 34-19-16. Set 8-in. csg. at 20 ft.; testing 933 ft.

CADDO—HOSSTON

Bayou State O. & G. Co.'s No. 1 Connell, 1,900 ft. N, 1,198 ft. E, SW cor. Sec. 18-21-14. Arrng to test 940 ft.

Shore Line Oil Corp.'s No. 1 Harrell, 250 ft. N and W, SE cor. Sec. 2-22-16. Drlg. 1,028 ft.

Shore Line Oil Corp.'s No. 1-B Standard, 250 ft. N and W, SE cor. Sec. 12-21-16. P.B. to 1,058 ft.

Shore Line Oil Corp.'s No. 1-C Standard, 250 ft. S and E, NW cor NE Sec. 18-21-15. Drlg. 1,073 ft.

SABINE PARISH—ZWOLLE

Alexander & Cane's No. 1 Fogman, SE cor. N¼ SW NE Sec. 18-7-11. Drlg. 1,675 ft.

Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11. S.D. 750 ft.

Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12. S.D. 1,100 ft.

Foster & Hartman's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. NE Sec. 10-7-12. Tested dry 2,696 ft.

E. D. Holcomb's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. SE Sec. 7-7-11. W.O.S.R. 2,580 ft.

M. J. Kisslck's No. 1 Sermon, 338 ft. N, 600 ft. E, SW cor. SW SE Sec. 11-4-13. Abd. 146 ft.

H. C. Maulding's No. 2 DeLatin, 330 ft. S and E. NW cor. NE SE Sec. 3-7-11. Drlg. 1,285 ft.

Monroe Prod. Co.'s No. 7 Sabine Lbr. Co., 330 ft. N and E, SW cor. NW SE Sec. 11-7-12. Set 6-in. csg. 2,340 ft.

Geo. L. Pace's No. 2 Phillips, 330 ft. N, 50 ft. W, SE cor. Sec. 35-8-12. Set 6-in. csg. 2,238 ft.

Pelican Nat. Gas Co.'s No. 14 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SW Sec. 11-7-12. Set 6-in. csg. 2,348 ft.

Tarver & Bauer's No. 1 Barthold, 330 ft. N and W, SE cor. SW SE Sec. 25-8-12. Dry and abd. 2,597.

Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 3-8-12. S.D. 1,590 ft.

EAST TEXAS (BORDER COUNTIES)

CASS COUNTY

United Gas Public Service Co.'s No. 1 Walton. John Coleman Sur. Drlg. 5,089.

R. K. Kamon et al's No. 1 Savage, Mary Patterson Sur. S.D. 4,016 ft.

HARRISON COUNTY

R. C. Payne et al's No. 1 Lowery, E. D. Spain Sur. P.B. to 3,524 ft.

PANOLA COUNTY

Givens & Holloway's No. 1 Wooten est., Winnie Mann Sur. S.D. 750 ft.

R. W. Price's No. 1 Crawford, J. A. Williams Sur. Rigging up.

SHELBY COUNTY

Bush Oil Int.'s No. 1 Windham, W. M. Blackburn Sur. S.D. 3,366 ft.

R. H. Davis' No. 1 Wooten est., Winnie Mann est. Set 10-in. 60 ft.

C. E. Litchfield's No. 1 Windham, A. H. English Sur. Dry and abd. 3,402 ft.

Cliff Stovall's No. 1 Pickering Lbr. Co., C. H. Patterson Sur. Set 10-in. 20 ft.

Turner & Neil's No. 1 Pickering Lbr. Co., P. W. Harvey Sur. S.D. 250 ft.

ALABAMA

CLARKE COUNTY

Magnolia Pet. Co.'s No. 1 Scotch Lbr. Co., 250 ft. N, 310 ft. E, C Sec. 17-10n-3e. Drlg. 3,760 ft.

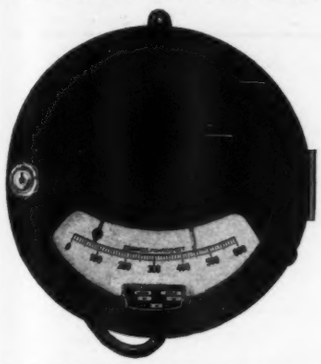
HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e. Drlg. 1,890.

NEW AND IMPROVED EQUIPMENT

Brown Offering New Type of Indicating Controller

The use of mercury switches to eliminate open make-and-break contacts controlled by the pointer is a revolutionary feature of a new automatic control indicating thermometer announced by the Brown Instrument Co. of Philadelphia, Pa. In this new controller every six seconds a motor-driven control table determines the location of the pointer in reference to the control setting, and tilts the mercury switch from one side to the other if the temperature has changed.



With this unique system the measuring mechanism is free to position itself unhampered by the control mechanism. There is no excess weight on the pointer, no distortion or restriction of pointer movement. The making of control contacts is not dependent upon friction because the switch is positioned with a positive action by the electric motor. Contacts are unaffected by vibration because the mercury switch is mechanically locked in place until a different position is required. Corrosion and dirty contacts are eliminated as the switch is sealed in glass. These mercury switches have capacities up to 15 amperes at 110 volts (10 amperes at 220 volts), thus eliminating external relays in most applications.

This control mechanism is adaptable to one, two or three-contact control (or signaling) systems. The device is adaptable for control of pressure, liquid level, and similar factors, as well as temperature. Catalog No. 6,702 describes this new line of controllers.

Diamond Starts Production of Stainless Steel Chains

For several years the Diamond Chain & Manufacturing Co., Indianapolis, Ind., has been making its roller chains of stainless steel on special order. The call for these chains has steadily increased. To serve this market better the company has now gone into production on the most commonly used sizes and these chains will be stocked for immediate shipment at all times. Stainless Diamond roller chains are made entirely of 18-8 stainless steel throughout, not coated or plated. They are recommended for use wherever corrosion is a problem.

Among the Equipment Houses

The Garrison Engineering Corp., 21 East Fortieth Street, New York, has appointed W. L. Walker Co., Inc., 800 South Main Street, Tulsa, as its sales representative in the Oklahoma and Kansas district in extending the Garrison-DuGas fire control service.

—

The American Iron & Machine Works Co. has opened a new plant at 2205 Quitman Street, Houston, Tex. A warehouse and a complete shop for all kinds of oil field repairing are in operation. H. M. (Mike) Myracle is manager of the Houston plant.

—

Appointment of Pidgeon-Thomas Iron Co., Iowa and South Main Streets, Memphis, Tenn., as distributor of Enduro stainless steel has been announced by N. J. Clarke, vice president in charge of sales, Republic Steel Corp., Youngstown, Ohio.

—

William E. Umstattd, executive vice president of the Timken Roller Bearing Co., Canton, Ohio, has been elected president, to succeed H. H. Timken, who resigned but continues as chairman of the board. Henry H. Timken, Jr., was elected a vice president of the Timken Roller Bearing Co. and a vice president of the Timken Steel & Tube Co.

—

Kenneth M. Leach, of the Audley Engineering Co., Ltd., Newport, Shropshire, England, who has been in the United States three months visiting the factories of the Merco Nordstrom Valve Co. and the Pittsburgh Equitable Meter Co., was recently joined by his father, R. W. Leach, chairman of the board of Audley. The Audley Engineering Co., Ltd., is closely affiliated with Merco Nordstrom and is licensed to manufacture "Audco" lubricated plug valves for Europe and Asia.

—

Better to serve its patrons in the territory between McPherson and Russell, Kans., where branch stores have been in operation for several years, the Bridgeport Machine Co., Wichita, Kans., has opened a new store in Chase. Hal Craig is in charge.

—

J. C. Herbert, assistant counsel of the B. F. Goodrich Co., has been elected vice president and general manager of Pacific Goodrich Rubber Co., Los Angeles, Calif.

—

J. C. Axelson, president of the Axelson Manufacturing Co., is in Europe. His itinerary will include England, Holland, Germany and Rumania. He expects to visit Denmark and Sweden also before returning.

—

The Edward Valve & Mfg. Co., Inc., East Chicago, Ind., has appointed McGregor Engineering Co., 213-14 Midco Building, Tulsa, as its representative in Oklahoma, northern Arkansas and the Texas Panhandle, for the sale of high pressure, high temperature valves for refinery and boiler plant service.

—

The Duriron Co., of Dayton, Ohio, manufacturer of acid and alkali handling equipment, has started construction of an extension to its alloy steel foundry which doubles the size of the old plant.

Motor for Use Where Dust and Dirt Become Problems

A new line of direct-current motors, designed for application where dust, dirt, moisture, or other foreign matter is present in large quantities, has been introduced by the General Electric Co. The new motors are totally enclosed, fan-cooled and are available in a wide variety of electrical and mechanical modifications, in sizes from one-half to 200-horsepower.

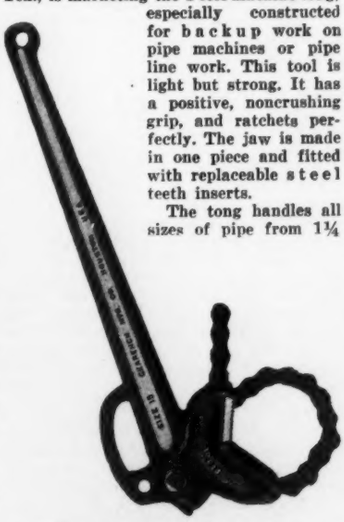
A system of dual ventilation is utilized. This, together with watertight conduit boxes and labyrinth seals at the cartridge-type bearing housings, effectively protects the working parts of the motor. An internal fan draws the warm air from the windings and core and circulates it around the totally enclosed interior of the motor so that it gives up its heat to the frame and end shields. An external fan draws cool air in through mesh openings in an outer end shield and directs it over the surface of the magnet frame and inner end shields. Close clearances between the end shields and the bearing housings, and grease seals along the shaft, prevent foreign particles from entering into the motor.

These new direct-current motors are especially suited for application in locations where obnoxious process-dusts prevail, and to such apparatus as pumps, conveyors, machine tools, sand screens and shakers. They are suitable too for outdoor use in mild climates.

A bulletin free from "advertising lingo" and designed to help the buyer to buy has been issued by the Fruehauf Trailer Co., Detroit, Mich.

Tong Designed for Backup Work Offered by Gearench

Gearench Manufacturing Co., Houston, Tex., is marketing the Petol machine tong, especially constructed for backup work on pipe machines or pipe line work. This tool is light but strong. It has a positive, noncrushing grip, and ratchets perfectly. The jaw is made in one piece and fitted with replaceable steel teeth inserts.



The tong handles all sizes of pipe from 1¼ to 22-inch. Many machine shops have found it of great value in breaking out tool joints from drill pipe, and collars from casing, because of the great reserve strength built into the tool. Complete information and specifications may be obtained from the Gearench Manufacturing Co.

Men Well Known in the Equipment Field

CHARLES D. WAGNER

Charles D. Wagner has been appointed vice president and manager of the D+B Pump & Supply Co., division of Emsco Derrick & Equipment Co., and will be in complete charge of all company operations in California, Mid-Continent and export.

Mr. Wagner for the past 10 years has been vice president and sales manager of Emsco, guiding the sales organization through the most trying times in the history of the supply business. For over 20 years Mr. Wagner has been active in the sales and development of pumping equipment. He has appointed L. C. Scott as sales manager of the Mid-Continent division of D+B Pump & Supply Co. Mr. Scott for many years has been active in the pumping equipment field covering the whole of the Mid-Continent both in sales and development work.

NEW SHIELDED ARC ELECTRODE

Fleetweld No. 7, a general purpose, heavily coated electrode for welding with the shielded arc on mild steel, is announced by the Lincoln Electric Co., Cleveland, Ohio. The new electrode is designed particularly for high speed and single pass welding. Its arc characteristics are such that it is particularly suitable for welds where fit-up is apt to be poor. Fleetweld No. 7 has a high burn-off rate and low splatter loss, providing exceptionally fast welding at low cost. The finished bead is smooth. Tests made on specimens of all weld metal show the following characteristics: Tensile strength, 70,000 to 80,000 pounds per square inch; yield point, 55,000 to 60,000 pounds per square inch; ductility (elongation approximately 20 per cent in 2 inches); resistance to corrosion greater than that of mild steel.

NEW TYPE BIT IS ANNOUNCED

A new type bit with chrome vanadium blades, announced by the Dixon Machine Co., San Diego, Calif., is said to have unusually long life. The body of the bit is made of forged steel with chrome vanadium blades arc welded to each side. The welding is done with Hardweld electrode manufactured by the Lincoln Electric Co., Cleveland, Ohio. The cutting edges of the blades are hard surfaced with Blackor, a granular tungsten carbide applied by the electric arc welding process.

Eastern Fields

(Continued from Page 54)

the second test on the Simon Shriver farm.

In Ritchie County, L. P. Bickle has a rig standing for a test on the Mary Miller farm in Murphy district. In the same district, his test on the P. W. Morris farm is drilling at 1,100 feet. In this district, Litton Gas Co. and Lewis Gas Co. have resumed drilling on the school lot. W. H. Bickle has rigged up No. 3 on the Fluharty heirs farm. In Grant district, Horner and Hank are down 2,004 feet on the J. W. Alkire farm, a test. L. N. Rinehart is drilling at 1,821 feet on the W. E. Rinard farm, also a test. Adams and Satterfield have reached 1,650 feet on the A. L. Mullenaux farm. Gillman & Co. have passed the 1,000-foot level on the Stephen Gillman farm, a test. In Clay district, Morris and others have made a location on the M. M. Broadwater farm.

In Roane County, Howard Bartlett and others have made a location on the Anna Brannon and others farm in Smithfield district. Charles Despard is building a rig for a second test on the Charles Starcher farm. In Spencer district, J. D. Silcott and others are fishing for tools at 1,725 feet on the John B. Lukens farm, a test. In Washington district, Jackson County, H. F. Parsons and others are rigging up on the W. L. Kelly farm.

SOUTHWEST PENNSYLVANIA

There were two producers, a gas well and one dry hole in Southwest Pennsylvania during the week. The largest was the second test of Union Gasoline & Oil Co. on the Mary B. Lindley farm in Amwell Township, Washington County. The total depth was 3,017 feet with the top of the Fifth sand at 2,993 feet and not showing much oil. Oil was found at 3,012-17 feet and it is making about 25 bbls. a day.

In Greene County, J. L. Garard & Co. completed No. 28 on the Corbley Greggs farm in Greene Township at 670 feet, the Dunkard sand. It will make a 1-bbl. pumper.

In Allegheny County, E. L. Oles completed a small gas well on the O. R. Degelman farm in Findlay Township in the 100-foot sand. In McCandless Township, O. Miller found all formations dry on the J. W. McCready farm. In this township, the same operator has a test on the Rodgers farm drilling at 1,200 feet.

In Greene County, J. B. Orndoff has reached 1,945 feet on the W. H. Scott farm in Center Township. Greene County Gas Co. has started pulling casing and cleaning out to drill deeper No. 1 on the Stephen Crayne farm. South Penn Oil Co. deepened No. 2 on the J. C. Barrackman farm. The Fourth sand was at 3,000-17 feet. The top of the Bayard sand was at 3,131 feet and oil showed at 3,133-35 feet. It filled up 100 feet in 24 hours.

In East Findley Township, Washington County, three wells are starting. The Natural Gas Co. of West Virginia has made a location on the C. W. Ealy farm 1 mile south of East Findley. About one-quarter of a mile south of this town, the same company has made a location on the W. H. Ealy farm.

In Amwell Township, Washington County, Carnegie Nautral Gas Co. is drilling on the N. B. Redd farm and has reached 1,834 feet. It is being deepened from the gas found in the Salt sand. The test on the A. M. Cole farm is drilling at 310 feet. Philadelphia Oil Co. has deepened slightly No. 1 on the Hulda Jenkins farm, which is a fair producer.

In South Franklin Township, Washington County, E. H. and J. B. Tague are drilling at 710 feet in No. 11 on the Adaline D. McKennan estate. In Mount Pleasant Township, Cowden Gas Co. has a rig standing for a second test on the William and Elizabeth Rankin farm.

In Dunkard Township, Greene County, Fred Garrison has started drilling on the Henderson Coal Co. The Pittsburgh Coal is at 70 feet. New Oil & Gas Co. has started drilling on the J. F. Wilson farm.

In Fayette County, Carnegie Natural Gas Co. has reached the top of the Maxon sand on the George N. Boyd farm in Jefferson Township at a depth of 1,412 feet. There was a showing of gas again at 1,389-95 ft.

Gulf Coast Fields

(Continued from Page 53)

Petroleum Co.'s No. 1-B Lutcher-Moore, about 6 miles north of No. 1, was drilling at 530 feet.

In the Gillis area of Calcasieu Parish, Union Sulphur Co.'s No. 2 Barbe estate, third test drilled on the 7,000-acre block, was below 6,602 feet.

At New Iberia in Iberia Parish, G. D. Spell has staked location for No. 1 Sadiater, 25 feet northwest of No. 1 recent discovered deep sand producer for the area. No. 1 Bernard proved a deep sand productive test last week when it came

Jack Harris, tool pusher for the Humble Oil & Refining Co., Childress, Texas

in flowing at the rate of 30 bbls. per hour through one-quarter inch choke at 3,828 feet. The well has been completed for 720 bbls. daily through three-quarters inch choke.

At Roanoke in Jefferson Davis Parish, Shell Petroleum Corp.'s No. 1 Jernigan, east offset to the discovery well, was drilling at 6,144 feet. Humble Oil & Refining Co.'s No. 3 Devilbiss, three-quarters mile southwest of Shell's producer, was drilling shale at 5,403 feet. Humble's No. 1 Martin Kratzer, about half a mile southwest of the discovery, was drilling at 907 feet in sand and gravel.

On the southern part of the structure of the old Welch Dome in Jefferson Parish, Tide Water Oil Co.'s No. 1 Mrs. A. Bourgeois created quite a bit of excitement during the past week when on a drill stem test at 5,370 feet through 4-inch drill pipe on one-quarter inch choke open five minutes showed 150 feet of good clean 29 gravity oil and 60 feet of salt water and 40 feet of sand. It had gas sand from 5,282-5,311 feet, soft sand with a good oil odor and cut of oil from 5,357-65 feet, greenish gray clay sand from 5,398-5,400 feet with an odor and cut of oil. At last report it was drilling below 5,520 feet. Royalty around the well is reported bringing as high as $500 per acre.

WILL MAKE OIL EQUIPMENT

The Grimes Machine Shop, in Bluffton, Ind., which has been in the hands of a receiver, has been sold to William and Fred Moser, Ray Ash and George Lautzenhiser, all of Bluffton. The new owners will operate the foundry and machine shop under the name of Bluffton Foundry & Machine Co., with Mr. Lautzenhiser as manager, and will continue the manufacture of oil drilling and pumping equipment. The Grimes Machine Shop introduced the bandwheel power for pumping and made them for years.

DEATH OF VAL FORSYTH

Valoris (Val) Lawrence Forsyth, one of the well known oil men of the Mid-Continent, suddenly passed away June 30, at Blackwell, Okla. He was on his way from Russell, Kans., to Cromwell, Okla., and had stopped at Blackwell for the night, where he was seized with a heart attack.

Born at Roulett, Pa., May 31, 1889, he had been in the oil business all his life and had a wide acquaintance in oil circles throughout Kansas, Oklahoma and Texas. For the past six years he had been in the employ of the Bridgeport Machine Co., with headquarters at Russell, Kans., where he had charge of the company's oil-producing properties. Prior to taking charge of the Bridgeport's oil properties in western Kansas and Oklahoma, he had worked in the capacity of branch store manager for the company in several Oklahoma and Texas oil towns. Before going with the Bridgeport he had been with several of the major oil producing companies, including the Prairie Pipe Line Co., in Kansas; the Sinclair Oil Co., in Oklahoma; and the Tidal Oil Co., in Texas. He was considered to be one of the best informed production men in western Kansas.

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ROYALTIES wanted in the Mid-Continent field, in exchange for royalties in Texas and Oklahoma. Acre for acre given, even exchange only. Address Box G-262, The Oil and Gas Journal, Tulsa, Okla.

PRODUCING Royalties in the East Texas Field bought and sold. Frank C. Scarborough, 201 Stuckey Building, Longview, Texas.

TIME TO INVEST in New Mexico. Royalty, drilling blocks, land in fee for irrigation. Ranches stocked with cattle or sheep. Write J. W. Wallrich, Lovington, New Mexico.

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